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Lebanon Water and Wastewater Sector Support

QUARTERLY REPORT: JANUARY 2013 — MARCH 2013

April, 2013

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LEBANON WATER AND WASTEWATER SECTOR SUPPORT

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ACRONYMS

ACWUA	Arab Countries Water Utilities Association	FAS System	Financial & Accounting
ADSL	Asymmetrical digital subscriber line	GA	Geographical Area
AFD	French Development Agency	GIS	Geographical Information System
AWP	Annual Work Plan	GIZ	Gezellshaft fur Internationale Zusammenarbeit
APP	Annual Work Plan	GNSS	Global Navigational Satellite System
ATP	Annual Training Plan	GOL	Government of Lebanon
BMLWE	Beirut-Mount Lebanon Water Establishment	GTZ	German Technical
BOQ	Bill of Quantities	Assistance	
BWE	Beka'a Water Establishment	HDSL	High-bit-rate digital line
CAS	Central Administration of Statistics	subscriber	
CCN	Cooperating Country National	HPIP	High Priority Intervention Program
CCTV	Closed Cable Television	HR	Human Resources
CDG	Chairman and Director	H&S	Health and Safety
General		IAR	Initial Assessment Report
CDM	Camp, Dresser and McKee Engineering	IEE	Initial Environmental
CDR	Council for Development and Reconstruction	Evaluation	
CRM	Customer Relations Management	IFI	International Financial
CIP	Capital Improvement Plan	Institution	
CO	USAID Contract Office	IRG	International Resource
COA	Chart of Accounts	Group	
CQCP	Construction Quality Control Plan	IRM	Information Resources Management
CSR	Customer Service Representative	IT	Information Technology
COP	Chief of Party	IWRM	Integrated Water Resource Management
COTR	Contract Officer Technical Representative	KPI	Key Performance Indicator
DG	Director General	LWWSS	Lebanon Water and Wastewater Sector Support
DAI	Development Alternatives	MIS	Management Information System
Inc.		MMS	Maintenance Management System
DCOP	Deputy Chief of Party	MOEW	Ministry of Energy and Water
DEP	Design Engineering Partners	MOF	Ministry of Finance
EIB	European Investment Bank	MOTGE	Mise en place des Outils Techniques de Gestion de l'Eau
EU	European Union	NLWE	North Lebanon Water Establishment
EA	Environmental Assessment	NRW	Non Revenue Water
EDL	Electricite du Liban (National Electricity Provider)	NWSS	National Water Sector
EMMP	Environmental Monitoring and Mitigation Plan	Strategy	
ERP	Enterprise Resource Planning	O&M	Operations and Maintenance
EOI	Expression of Interest	PMP	Performance Monitoring Plan

PSP	Private Sector Participation
PPM	Parts per million
PPP	Public Private Partnership
SCADA	System Control and Data Acquisition
SLWE	South Lebanon Water Establishment
SMP	Subcontractor Management Plan
SOW	Scope of Work
STTA	Short-Term Technical Assistance
TBC	To be confirmed
TOR	Terms of Reference
USAID	United States Agency for International Development
USG	United States Government
WE	Water Establishment
WET	World Engineering and Technology
WPS	Water Pumping Stations
WWTP	Wastewater Treatment Plant

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A. INTRODUCTION

The Lebanon Water and Wastewater Sector Support (LWWSS) Program is a \$34 million, 67-month (October 2009 - April 2015) program funded by USAID and implemented by Development Alternatives, Inc. (DAI). LWWSS provides technical assistance and related services to impact USAID/Lebanon's Assistance Objective (AO) 4 - "Improved water services for all in Lebanon" - and the corresponding Intermediate Results (IRs) - more efficient management of water resources, improved water infrastructure, and enhanced water governance.

LWWSS works in cooperation with the Ministry of Energy and Water (MOEW) to assist Lebanon's four Water Establishments (WEs) in strengthening their capacity to deliver high-quality and sustainable services. Ultimately, the LWWSS program aims to help the WEs advance towards financial and operational sustainability and overcome the many challenges they face, including staff shortages and an aging workforce, poor customer relations, low tariffs that fail to recover operating costs, lack of metering, excessive non-revenue water, and underinvestment in the water and wastewater infrastructure.

The areas of focus that LWWSS targets in working with the WEs include:

- Building management capacity within the WEs;
- Increasing financial management capacity and financial system integration;
- Procuring equipment to complement technical assistance and capacity building;
- Business planning to increase capital planning and benchmarking capacity;
- Funding urgent infrastructure works to enhance delivery or access and coverage;
- Developing a corporate culture, customer service orientation and public outreach programs.

Based on the initial LWWSS program objectives of building on previous USAID and other donor program progress and as a result of lessons learned during the first two years of the program, LWWSS has focused on implementing its Year-Three Work Plan within specific areas of Water Establishment (WE) operations. The LWWSS program has, therefore, tailored the individual WE work plans to apply the information gathered on each WE and to leverage the successes accomplished to date.

This Quarterly Report covers the period from January 2013 – March 2013 and provides quarterly highlights, component updates that provide technical perspective, and then details progress of project activities broken down by each Water Establishment and then further by each component, as per the Year Four Work Plan. Each component consists of several activities, and progress of each is depicted in the accompanying Gantt charts and detailed in the narrative. Additionally, this quarterly report includes the preliminary PMP tables that report progress on the indicators for the first half of year four of the project.

B. QUARTERLY ACTIVITY HIGHLIGHTS

Site Preparation Work On-Going before Installation of Generators in North Lebanon



Subcontractor Edan Group began excavation work at the Rahbeh Pump Station (above); LWWSS and Edan Group engineers inspecting the excavation work (below)



Power cuts in Lebanon are frequent, happening several times a day and for several hours at a time, which means that pump stations without back-up power generators are unable to reliably supply water to customers. As part of its work assisting the North Lebanon Water Establishment (NLWE), USAID's Lebanon Water and Wastewater Sector Support (LWWSS) Program is supplying back-up power generators to eight critical pump stations throughout North Lebanon.

LWWSS' work began in 2011, identifying critical sites for back-up power generation, designing the required generator infrastructure, and ordering the generators and associated equipment. The generators will be installed during spring and summer 2013, and until then, site preparation work is on-going. After the generators and associated equipment are installed, the LWWSS program will conduct operations and maintenance trainings for NLWE personnel.

The provision of power generation equipment for key pump stations in North Lebanon will result in an increased water supply to high density urban areas within Tripoli, the capital of North Lebanon, as well as enabling the pumping and distribution of water to thousands of customers in Hab, Aayrouniyeh, Nakhle, Bqerqacha, Beshmezzin, Qbayyet, Kfartoun, and Rahbeh.



LWWSS and Edan Group engineers at Beshmezzin Pump Station inspecting old generator

USAID Completes Design for Rehabilitation of Two Major Pump Stations in South Lebanon



Above: Batoulay well #2 and pump station.

Below: LWWSS project engineers at Batoulay pump station.



USAID's Lebanon Water and Wastewater Sector Support Program (LWWSS) recently completed the design for the rehabilitation of two major pump stations in South Lebanon from which an estimated 147,620 people will benefit from an improved water service.

The Ouadi Jilo and Batoulay Stations are in dire condition and require immediate intervention to replace their inefficient pumps and motors, enhance their overall performance, reduce their electrical consumption, and increase their supply hours to the population of South Lebanon. USAID's activity includes the rehabilitation of the pump stations, as well as rehabilitating wells in the vicinity of the stations that pump water to reservoirs located at the stations. The design phase took place in 2012 and is now completed, and the procurement and construction phase will take place over the next two years. The activity will also include training for pump station operators by the construction contractor, which will result in fewer site accidents and equipment breakdowns.

The Ouadi Jilo and Batoulay Stations cover important service areas in South Lebanon. An improvement to their infrastructure will increase pump capacity by 25 percent and reduce energy consumption by 15 percent. By lowering the cost of operations, the financial condition of the WE is improved.



LWWSS engineers at Ouadi Jilo pump station.

USAID builds the capacity of the Bekaa Water Establishment Laboratory technicians to deliver cleaner water to over 338,000 people



Above: Training at AUB.

Below: Hands-on application of water tests by lab technicians.



Lab technicians during on-the-job assignment at BWE laboratory.

USAID's Lebanon Water and Wastewater Sector Support Program (LWWSS) recently trained 10 laboratory technicians including the Head of Stations and Lab Departments at the Bekaa Water Establishment on water quality management.

The three day training took place at the Environmental Health Department of the Faculty of Health Sciences at the American University of Beirut between February 26 and 28, 2013.

The training aimed to enable BWE laboratory and management team to understand the basics of laboratory operations and management, and conduct their activities in accordance with standard practices. Participants were introduced to water quality determinants, water and wastewater treatment processes, and water quality monitoring. They also implemented laboratory training in best practices, operation and maintenance, and health and safety.

The training was followed up by a practical application and on-the-job assignments on 12, 19, and 26 March, 2013. The sessions aimed to enable seven technicians that perform laboratory water tests at the BWE station to acquire proficiency needed to implement proper water quality monitoring.

This activity increases the BWE capacity to deliver cleaner water to the entirety of the BWE service area and its population, thus enhancing its credibility towards its water consumers. The activity impacts a population of over 338,000 served by the WE water supply in the Bekaa.

C.PROJECT PROGRESS BY WATER ESTABLISHMENT AND COMPONENT

Project activities are broken down by each water establishment and then further by each LWWSS component, in conformance with the Year Four Work Plan. Each component consists of several activities, and progress of each is depicted in the Gantt charts and detailed in the narrative.

1. Beka'a Water Establishment (BWE)

Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
2.2	Building the WEs' Water Quality Management Capacity: Water Quality Testing Plan			
2.2.1	Conduct water quality baseline survey based on seasonal sampling of all sources, with on-the-job staff training	AUB	Activity Completed	Jan, 2013
2.2.2	Establish a region-specific and Libnor-compatible testing protocols and methodology	AUB	Activity Completed	Oct, 2012
2.2.3	Plan and conduct a comprehensive user training on all aspects of lab operation	AUB	Activity Completed	April, 2013
2.3	Capacity Building in Operation and Maintenance of Pump Stations			
2.3.1	Pump station operators basic O&M and H&S training (70+ staff)	CDM (BG, GT), LWWSS (MK) Kredo	Activity Completed	May, 2013
2.4	Public administration and Process Management Training			
2.4.2	Public administration and process management training aiming at increasing staff familiarity with WE systems and processes	- EMC (MC), DAI (MK) - Local supplier (TBD)	Training completed Follow-up in place	June, 2013
2.5	Training on Network Maintenance and Repair			
2.5.1	Basic training on network maintenance, monitoring and repair, for existing and newly recruited network team personnel	- DAI (MK) - Kredo/TBD	Training completed Follow-up in place	June, 2013

BG-Bassem Ghayda; MK-May Koleilat; GT-Gulnard Ters; MC-Mike Chalah

Activity 2.2 - Building the WEs' Water Quality Management Capacity

This activity with the American University of Beirut (AUB) started on October 1, 2011 and ends on April 30, 2013. The contract with AUB stipulates the following deliverables and dates:

Deliverable 1 due in November 30, 2011: Review and document the management of the potable water supply by the Bekaa Water Establishment

Status: This deliverable and AUB's report associated with it was completed in year three.

Deliverable 2 due in October 31, 2012: Conduct a comprehensive baseline water quality surveillance of sources feeding distribution networks and piped water supplied by BWE across its service territory.

Status: This deliverable was scheduled to be completed by end of October, 2012. However, as reported earlier, this activity got delayed due to a delay in the chemical water assessment testing caused by a breakdown in AUB's water testing equipment (this delay is not anticipated to result in any cost increase or extension of the AUB purchase order). The report was reviewed thoroughly by the LWWSS team and comments were sent back to AUB late March.

Deliverable 3 due in October 31, 2012: Develop a comprehensive potable water quality monitoring program.

Status: This deliverable was issued to DAI on October 31, 2012. DAI's review and comments were incorporated by AUB in December, 2012.

Deliverable 4 due June 1, 2012: Plan the location and specifications of laboratory units (locations, numbers and specifications) needed to implement potable water quality monitoring and prepare an inventory of required laboratory equipment and supplies.

Status: This deliverable by AUB was completed.

Deliverable 5 due in December 31, 2012: Design and implement a capacity building training program to enable the water establishment staff to conduct monitoring and quality assessment activities.

Status: Due to delays caused by the halting of the hiring process in BWE, the LWWSS program agreed with BWE to proceed with the training with the available staff during February and March 2013. As such, ten BWE staff including the Head of Stations and Lab Departments were trained on 26, 27, and 28 February, 2013 at the Environmental Health Department of the Faculty of Health Sciences at the American University of Beirut. This was followed by a once a week on-the-job training for nine BWE lab technicians which started beginning March 2013 to be completed in April 2013. However, as the BWE lab has not yet been refurbished, AUB offered that the training be held at its premises instead. The training involved assignments that were conducted on-the-job at the BWE laboratory.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY11)				Y-3 (FY12)								Y-4 (FY13)														
		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4								
		J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
2.2	Water Quality Testing Plan																											
	Activity introduced *																											
	Subcontract placed with AUB as follows:																											
	Task 1: Review and document management of potable water																											
2.2.1	Task 2: Comprehensive water quality survey (2 seasons)**																											
2.2.2	Task 3: Develop water quality monitoring program																											
	Task 4: Plan location and specification of lab units																											
2.2.3	Task 5: Capacity building program***																											
	* Year Three Workplan																											
	** Delayed until Jan '13 as reported in the year four work plan																											
	*** Delayed until March '13 as reported in the year four work plan																											

Legend

	Time frame as planned
	Delays, as indicated in Year Four Workplan
	Additional delays, detailed in quarterly report

Activity 2.3. – Building Operators' Capacity in Operation and Maintenance of Pump Station Equipment

During year two, the LWWSS program successfully completed the Pump Station O&M training for 20 staff at BWE. This training resulted in improved skills and processes for pump station staff in operating and maintaining pump station plant and equipment, as well as improved health and safety practices. The LWWSS program received requests to continue providing similar training to other existing and forthcoming staff at BWE, to increase knowledge of operators and enhance operation and maintenance at pump stations.

The delivery of this training has been delayed due to the fact that Kredos subcontract amounts for this activity have been almost entirely spent, and a subcontract extension is being processed by USAID for approval. The delays on the approval on the subcontract extension request are due to a number of clarifications had to be submitted to USAID's Contract Office, as part of their review of the request. The LWWSS program expects that the subcontract may be approved by the USAID Contract Office during the month of April, which will then enable the training to proceed.

In the meantime, planning for the pump station operators' training continued throughout the second quarter. This included meetings with the BWE staff, including Head of Stations Khalil Azar, as well as site visits to the Shamseen pump station and the Zahle water treatment station where the trainings will take place.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY11)					Y-3 (FY12)					Y-4 (FY13)				
		Q2		Q4			Q1		Q2			Q3		Q4		
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
2.3	Capacity Building in O&M of Pump Stations															
	Activity introduced*															
	Staff interviews															
	Course preparation															
	Conduct training**															
	* Year Three Workplan															
	** Delayed as reported in the year-three workplan amendment; Updated dates reported in the year four work plan															

Legend

	Time frame as planned
	Delays, as indicated in Year Four Workplan

Activity 2.4 - Public administration and process management training aimed at increasing staff familiarity with WE systems and processes

As reported previously, LWWSS' Finance Specialist Mike Chalah and IT & Systems Specialist Ahmad Siddik are currently in the assessment and planning phase of this activity. By the end of the first quarter, Mr. Chalah and Mr. Siddik had finalized a matrix that details BWE's departments and divisions and their main tasks. In February 2013, the matrix was discussed with the BWE Director General Maroun Moussalem, who approved it. Consequently, Mr Chalah started planning the scope of work and content of the training.

The training is planned for the third quarter of year four, and will most likely be conducted by a third-party management training specialist who will develop the training material based on the existing materials used by the LWWSS program to date, the by-laws of BWE, and other materials available to the trainer at the time of information collection.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-3 (FY12)					Y-4 (FY13)				
		Q3		Q4			Q1		Q2		
		A	M	J	J	A	S	O	N	D	J
2.4	Public Administration and Process Management Training										
	Activity introduced										
	Procurement of services										
	Course preparation										
	Course provision										

Legend

	Time frame as per Year Four Work Plan
--	---------------------------------------

Activity 2.5 - Basic training on network maintenance, monitoring and repair, for existing and newly recruited network team personnel

This new activity relates to training for network repair operators at BWE, covering basic maintenance and repair of drinking water distribution pipes and connections, and health and safety practices. The training builds on the successful activity undertaken by LWWSS around pump station O&M and establishes a similar effort in the areas of water distribution networks, where water leaks are extremely frequent and breakdowns within the deteriorated networks happen on a daily basis. The training will cover network repair basics, such as leak detection, team composition, equipment needs, project management and task orders, site mobilization for repair team, sequencing of repair tasks, as well as health and safety.

LWWSS began conducting a training needs assessment during the first quarter, aiming to identify the most suitable trainees in the BWE region. However, the training needs assessment will continue once the LWWSS program has received approval on the request for Kreda's subcontract extension. Refer to activity 2.3 for more details regarding this delay.

Timeline

Work Plan Item	Work Plan Activity Title; Activity Stages	3 (FY1)	Y-4 (FY13)											
		Q4	Q1	Q2	Q3	Q4								
		J A S	O N D	J F M	A M J	J A S								
2.5	Training on Network Maintenance and Repair													
	Activity introduced*													
	Staff interviews; training needs assessment													
	Course preparation													
	Training provision													
	* Year Four Workplan													

Legend

	Time frame as planned
	Delays detailed in quarterly report

Component 3: Increase Financial and Commercial Viability of Water Establishments

Work Plan Activity

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
3.2	Integrate the WEs Financial, Accounting, Customer Service and Business Process Systems: The Enterprise Resource Planning (ERP) Platform			
3.2.2	Implement software platform including Finance and Accounting System and Customer Relationship Management solution	EMC (MC, NA), LWWSS (AS), ABA EDM	Activity completed	October, 2012
3.2.3	Implement intranet system enabling web-browser based e-training, communication and business process tools	EMC (MC, NA), LWWSS (AS), ABA EDM	Activity completed	June, 2013
3.2.4	Conduct training, assist in transition phase and provide one/two year onsite support	EMC (MC, NA), LWWSS (AS), ABA EDM	Activity completed	September, 2013

MC-Mike Chalah; NA-Nada Akl; AS-Ahmad Siddiq

Activity 3.2 - Integrating the WE's Financial, Accounting, Customer Service and Business Process Systems

Enterprise Resource Planning System Progress

During January, preparation work for the go-live of the Billing & Collection and CRM modules was completed. The master file of the BWE subscribers (of Zahle, Baalbeck, and Chamsine) was finalized in February, and the go-live of the Billing and Collection and CRM modules took place in March 2013 at the Zahle Branch. The go-live in Baalbeck and Shamseen will take place in April 2013.

During February, the training on SharePoint and Document Control was completed and the documentation and registration module were fully functional at the Zahle Branch. Furthermore, follow up sessions have been conducted for the following modules: procurement, budget, accounting, payroll and HR, documentation and registration, and inventory. The purpose of the follow up sessions was to monitor the quality of data and reports. February payrolls were generated using the new system.

The sign off template was prepared and shared with the BWE DG. Furthermore, a presentation was given to the Board of Directors to show the progress of work for all ERP modules.




The ERP will be fully functional at all branches by June 2013 after all data is checked and the 2012 financial and fiscal year is closed. After the ERP is fully functional, follow up sessions on all the implemented modules will be conducted:

- To make sure that the users are following the right processes;
- Employees are using the new implemented ERP;
- To solve issues users might encounter while using the new ERP; and
- To modify requested changes and produce required reports.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-1 (FY10)					Y-2 (FY11)					Y-3 (FY12)					Y-4 (FY13)								
		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4					
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
3.2	The Enterprise Resource Planning (ERP) Platform																								
	Activity introduced*																								
	Initial assessment																								
	Implementing accounting prerequisites																								
	Implementing prerequisite training (finance, accounting, etc)																								
	Pilot processes applied and tested																								
	IT infrastructure survey																								
	Procurement of IT infrastructure																								
	Process mapping completed, software specifications drafted																								
	Procurement of software design and implementation																								
	System implementation, adoption, user training, and migration**																								
	Provide on site support for a period of 12 months																								
	* All tasks are as per Year Two work plan amendment #2																								
	** Delays first reported in Year Three fourth quarterly report																								

Legend

-  Time frame as planned
-  Delays, as indicated in Year Four Workplan
-  Additional delays, detailed in quarterly report

Component 4: Capital Investment Planning and Program/Project Management

Work Plan Activity

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
4.4	Master planning			
4.4.1	Water Supply and Sewerage Master plan	Local subcontractor (TBC) Valuadd	- Activity SOW defined, activity started (Year 3)	September, 2013

Activity 4.4 - Developing Water Supply and Sewerage Master plan

The kick-off meeting with BWE's Director General (DG) Maroun Moussallem, the appointed subcontractor for the Master Plan activity Kreda, and the LWWSS team took place in early January. The focus of the meeting was to introduce the objectives and deliverables of the Master Plan activity, as well as introduce the list of key personnel working on the activity and establish communications protocol with the BWE.

Since the kick-off meeting, Kreda has proceeded with data collection through meetings with Ms. Randa Nemer, Advisor to the Minister of Energy & Water, as well as with many employees from the MOEW and CDR. Based on the data collected, Kreda submitted a draft inception report in February. The report was discussed and reviewed in a meeting with the LWWSS team along with DAI's consultant Mr. Philip Giantris.

Subsequently, a meeting was held with the BWE Director General Mr. Maroun Moussallem to discuss the lack of availability of data by the BWE. During the meeting, it was agreed that the DG will put all available data at Kreda's disposal, and will send a letter to the Central Administration for Statistics requesting information regarding population counts and available statistics for the project area.

As such, Kreda collected additional data with the help of the BWE DG, and submitted an updated version of the Inception Report on March 22. The report is being reviewed by the LWWSS team and DAI's consultant Mr. Philip Giantris.

LWWSS anticipates the implementation period of this activity will last 16 months (December 1, 2012 – March 31, 2014).

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY11)					Y-3 (FY12)								Y-4 (FY13)								Y-5 (FY14)																		
		Q3		Q4			Q1		Q2			Q3			Q4		Q1		Q2			Q3			Q4		Q1		Q2			Q3									
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
4.4	Water Supply and Wastewater Master Plan																																								
	Activity introduced*																																								
	Define scope of works; Procure the master planning services**																																								
	Develop Master Plan***																																								
	* Year three work plan																																								
	* Year four work plan																																								

Legend

	Time frame as planned
	Delays, as indicated in Year Four Workplan

Component 5: Procurement of Technical Equipment to Strengthen WEs

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
5.4	Upgrading the Water Analysis Laboratories			
5.4.1	Upgrade the water testing laboratories with infrastructure and equipment	AUB Local suppliers	- Urgent equipment provided Y1-Y3 - Comprehensive equipment supplied as per AUB specs (Y4)	September, 2013
5.4.2	Establish service agreements, and conduct user training programs for the above activities	AUB LWWSS (MK)	- Activity in progress	September, 2013

MK-May Koleilat

Activity 5.4 – Upgrading Water Analysis Laboratories

As mentioned in Activity 2.2 above, the AUB report relating to this deliverable is completed.

During the first quarter, LWWSS finalized the design of the mechanical, civil and electrical works for the fit-out of the laboratory in the Zahle Water Treatment plant, in order to commence procurement of the internal enhancement works and of the equipment prescribed by AUB. The bids for execution of the works and supply/installation of equipment were launched in December 2012.

The RFP for the procurement of laboratory equipment and consumables was nationally advertised in early January, and four vendors collected the RFP. Two proposals were received by January 28. The remaining bidders have not presented proposals since they would not be able provide all of the requested consumables. In February, the evaluation committee together with the consultant CDM Smith reviewed the technical submittal of the bidders, and an award was made to Multilab S.C.S. based on compliance with the RFP technical specifications and delivery time. The purchase order has been approved by DAI contracts manager in Bethesda by end of March 2013. It is expected that the delivery will take approximately 2 months.

Lab Rehabilitation

The BOQ and technical specifications for the rehabilitation of the laboratory in Zahle were completed in early January, and an RFP was advertised on January 9 and issued to seven vendors. The LWWSS program received only one bid by Sanabel s.a.r.l. by February 28, 2013. The evaluation of the proposal was conducted during March 2013 by a committee formed of the Operations and Procurement Manager, the Construction Manager and the representative of CDM Smith. The technical submittal was found to be acceptable; however the committee raised concerns about some expensive items in the financial proposal (amounting to 116,550,000 LBP). Consequently, a meeting was held on March 4 with the bidder's General Manager, Mr Wafic El Mallah, after which Sanabel submitted a revised final offer. The offer (89,890,000 LBP) was found acceptable by the committee, and the bidder was

recommended. The contract is currently under preparation and it is expected to be signed in early April 2013.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-3 (FY12)					Y-4 (FY13)												
		Q3			Q4		Q1		Q2		Q3		Q4						
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
5.4	Upgrading the Water Analysis Laboratory																		
	Finalize laboratory layout and commence procurement																		
	Deliver and install equipment, complete works																		
	Establish service agreements and provide user training																		

Legend

 Time frame as per Year Four Work Plan

Component 6: Small- to Medium-Scale Infrastructure Work on Water and Wastewater in the BWE

Workplan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
6.1	Decreasing Water Losses and Upgrading Existing Networks			
6.1.1	Design network upgrades in Zahle: rehabilitating the water supply network of the region of Mar Elias	LWWSS (Infrastructure PM) Local Engineering Firm (TBD)	Design completed; Supervision Started	January 2013
6.1.2	Implement network upgrades in Zahle: rehabilitating the water supply network of the region of Mar Elias	Local Engineering Firm (TBD) Local subcontractor (TBD)	Contract placed, Works commenced	May 2013
6.1.3	Design network upgrades in Zahle: rehabilitating five branch networks in Haouche el Oumara, Maalaka, Rassieh, Karak-Forzol and Midan	LWWSS (Infrastructure PM) Local Engineering Firm (TBD)	Works continue	February 2014
6.1.4	Implement network upgrades in Zahle: rehabilitating five branch networks in Haouche el Oumara, Maalaka, Rassieh, Karak-Forzol and Midan	Local Engineering Firm (TBD) Local subcontractor (TBD)	Works continue	February 2014

*Activities 6.1.1 and 6.1.3 are combined under one service subcontract for engineering design and supervision.

**Activities 6.1.2 and 6.1.4 are combined under one infrastructure works subcontract.

Activity 6.1 - Decreasing Water Losses and Upgrading Existing Networks

In mid-January, the LWWSS' engineering team finalized their review and approval of the WET detailed design, detailed drawings, technical specifications, and bill of quantities. The RFP for the construction works was then nationally advertised on January 24 and 12 construction firms collected the RFP. Eight bidders' proposals have been submitted by the deadline of February 22. On Tuesday February 26, the

evaluation committee composed by Mr Klink, Mr Hasbini and Mr Abouzeid completed the evaluation of the eight bidders' proposals. The bid proposal of NICOLAS SROUJI Establishment for Contracting was considered to be in full compliance with the RFP requirements (BOQ and Specifications) and was determined to be technically acceptable, with a pricing within industry standard costs. Therefore, "NICOLAS SROUJI Establishment For Contracting" was recommended as the winning bidder for submitting the lowest valued technically acceptable offer amounting to 1,481,485,721.25 LBP (approximately USD \$982,743.43). The request for consent to subcontract was sent to the USAID Contracting Officer.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY'11)		Y-3 (FY'12)				Y-4 (FY'13)				Y-5 (FY'14)																		
		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4										
		M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
6.1	Decreasing Water Losses and Upgrading Existing Networks in Zahle																													
	Projects introduced*																													
	Hiring project personnel; conducting technical investigation																													
	Drafting engineering SOW, appointing engineering subcontractor																													
	Engineering design stage and preparation of bid package																													
	Procurement and contract signature with infrastructure subcontractor																													
	Site implementation stage																													
	Completion of both projects **																													
	* Year Three work-plan																													
	** End date as per DAI LWWSS follow-on contract mod #3																													

Legend

- Time frame as planned
- Delays detailed in quarterly report

Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach

Workplan Activity

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
7.6	Consumer-Targeted Awareness Programs			
7.6.3	Outreach material promoting public awareness and education on water conservation	- EMC (NA) - Local subcontractor (TBD)	- Activity completed	March, 2013

NA – Nada Akl

Activity 7.6 - Outreach material promoting public awareness and education on water conservation

On behalf of the WEs, and at their request, LWWSS continued to promote public awareness on water conservation and water use efficiency to help decrease overuse and thereby enable more people to have access to water supply at home. The planned activity included developing, printing and distributing water conservation calendars. LWWSS targeted to reach a total of 26 water establishment branches (at all four WEs), thereby extending its awareness message to most of the population.


During the second quarter, work progressed as follows:

- Photo sessions took place throughout January.
- The WEs have reviewed and provided input on the calendar design and content.
- Editing of the layout has been conducted accordingly, including with USAID Lebanon, who approved the content.
- Both English and Arabic versions of the calendars were finalized and printed (2000 Arabic and 500 English copies) in February.
- The calendars were distributed during the first week of March to the four WEs as well as to the LWWSS program partners, subcontractors, and other stakeholders. The four WEs distributed the calendars to their 4 Head Offices and 34 branches where they can further reach their customers.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-3 (FY'12)		Y-4 (FY'13)															
		Q3		Q4		Q1		Q2		Q3		Q4							
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
7.6	Promoting public awareness and water conservation																		
	Activity introduced																		
	Develop concept and content																		
	Discuss content and agree with WE management																		
	Obtain USAID approval on content, print and share																		

Legend

 Time frame as per Year Four Work Plan

2. Beirut-Mount Lebanon Water Establishment (BMLWE)

Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

There are no component two activities with BMLWE in the year-four work plan.

Component 3: Increase Financial and Commercial Viability of Water Establishments

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
3.1	Upgrade Finance and Accounting Standards and Methods			
3.1.5	Develop procedures and a standard manual for yearly budgeting within the WE, and conduct applied training to key departments.	- EMC (MC), DAI (AS) - ABA	- Procedures defined, manual produced, training conducted.	September, 2013
3.1.7	Develop module, procedures and provide training on the Cost Tariff Model for Strategic Planning and Budgeting	- EMC (MC), DAI (AS) - ABA	- Module installed, connected to ERP - Procedures defined, training conducted	September, 2013
3.2	Integrate the WEs Financial, Accounting, Customer Service and Business Process Systems			
3.2.2	Implement software platform including Finance and Accounting System and Customer Relationship Management solution	EMC (MC, NA), LWWSS (AS), ABA EDM	- Activity completed	October, 2012
3.2.3	Implement intranet system enabling web-browser based e-training, communication and business process tools	EMC (MC, NA), LWWSS (AS), ABA EDM	- Activity completed	March, 2013
3.2.4	Conduct training, assist in transition phase and provide one/two year on-site support	EMC (MC, NA), LWWSS (AS), ABA EDM	- Activity completed	September, 2013

MC-Mike Chalah, AS-Ahmad Siddik, NA-Nada Akl; ABA-Allied Business Advisors

3.1.5 - Develop procedures and a standard manual for yearly budgeting within the WE, and conduct applied training to key departments

As per the year four workplan, LWWSS' Financial Specialist Mike Chalah and subcontractor ABA will work on a budget manual for BMLWE that is based on the five-year business plan which they assisted with in years two and three. This manual will introduce a new culture in BMLWE that will improve the use of budgeting as a planning and control tool, and will provide BMLWE key staff (finance department, engineering department and top management) with a step by step guide on how to plan, prepare and implement the budget to improve planning and operations.

During the second quarter, Mr. Chalah and LWWSS' subcontractor ABA continued their work on the budget manual that is based on BMLWE's five-year business plan. The manual will include the following nine sections:

- Introduction
- Budget Preparation
- Budget Execution
- Budget Transfer


- Policies & Procedures
- Closing Annual Budget
- Forecast Budgeting & Planning
- Budget Control
- Attachments

The manual was drafted in March, and will be reviewed in April 2013. After its finalization in the third quarter of year four, Mr. Chalah and ABA will conduct a training for five people from BMLWE who are working in the finance and budget department (one financial manager, three supervisors, and one accountant).

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-3 (FY12)					Y-4 (FY13)												
		Q3			Q4		Q1		Q2		Q3		Q4						
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
3.1.5	Develop procedures and a standard manual for yearly budgeting																		
	Activity introduced																		
	Investigate, and define key best practices in budgeting																		
	Draft budgeting manual and establish linkages with ERP solution																		
	Issue final manual and conduct training and follow-up																		

Legend

 Time frame as per Year Four Work Plan

3.1.7 - Develop module, procedures and provide training on the Cost Tariff Analysis Module for Strategic Planning and Budgeting

As per the year four work plan, LWWSS' Financial Specialist Mike Chalah and subcontractor ABA will update the cost tariff analysis module (originally developed by the USAID LWPP project in 2004) and connect it to the ERP platform. This will enable the module to fully utilize the ERP solution's output and provide BMLWE management with a strong financial, analytical and planning tool for costing and tariff to improve their decision making process.

During the first quarter, Mr. Chalah and LWWSS' subcontractor ABA continued their work on the cost tariff analysis which will most likely be composed of the following nine sections with Excel sheet templates that will be linked to the ERP:

1. Assumptions
2. Scenarios
3. Consolidated results
4. Cost Recovery
5. Income Statements
6. Variable expenses
7. Main fixed expenses
8. Project expenses
9. General expenses

The module was drafted and will be finalized during the third quarter of year four, after which it will be connected to the ERP and a training will be conducted with six people from BMLWE's financial department (financial manager, accountant, and four supervisors).

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-3 (FY'12)		Y-4 (FY'13)															
		Q3		Q4	Q1		Q2	Q3		Q4									
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
3.1.7	Develop module and training on the Cost Tariff Analysis Module																		
	Activity introduced																		
	Conduct data collection from finalized modules of the ERP																		
	Conduct modeling, update model and connect to ERP platform																		
	Develop user manual, train and follow-up																		

Legend

 Time frame as per Year Four Work Plan

Activity 3.2 - Integrating the WE's Financial, Accounting, Customer Service and Business Process Systems

Enterprise Resource Planning System Progress

Progress during the second quarter is summarized below:

- The Billing and Collection module was finished and tested in February 2013 at the Talet El Khayat branch, and considered as a pilot. A decision on whether the module will be launched at further branches is still pending consultations with BMLWE (Kindly refer to section: **Update on ERP risks in BMLWE** for details).
- As for the 20 PCs that will be distributed at branches gradually, 5 PCs were installed at: the Talet El Khayat branch, the Ashrafieh branch, the principal warehouse, the Hazmieh warehouse, and the BMLWE Head Office budgeting department. The distribution of the remaining 15 computers is pending the implementation of the Billing and Collection module in the branches.
- The remaining sessions of the Advanced IT training have been cancelled due to the lack of interest of the BMLWE personnel. Three out of the six sessions have been implemented.
- With regard to the modules implementation: the payroll module, the SharePoint module, and the documentation and registration module were completed in February. The go-live of the inventory module took place in March in the principal warehouse, and the store keepers were trained again on the module. However, the connection between the Head office and the Dora warehouse was impeded, which hindered the use of the module by BMLWE.
- Data for the documentation and registration module was migrated from an Excel template to NAV.

A summary of next steps is included below:

- The Billing and Collection module training is pending consultations with BMLWE.
- The CRM module will be implemented after the Billing & Collection module implementation.

After there is a fully functioning ERP system at BMLWE, follow up sessions on all the implemented modules will be conducted:

- To make sure that the users are following the right processes;
- Employees are using the new implemented ERP;
- To solve issues users might encounter while using the new ERP; and
- To modify requested changes and produce required reports.

Challenges are detailed below in *Section G: Challenges, Problems, Issues*.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	1 (FY1	Y-2 (FY11)					Y-3 (FY12)					Y-4 (FY13)					
		Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
		J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J	J A S				
3.2	The Enterprise Resource Planning (ERP) Platform																	
	Activity introduced*																	
	Initial assessment																	
	Implementing accounting prerequisites																	
	Implementing prerequisite training (finance, accounting, etc)																	
	Pilot processes applied and tested																	
	IT infrastructure survey																	
	Procurement of IT infrastructure																	
	Process mapping completed, software specifications drafted																	
	Procurement of software design and implementation																	
	System implementation, adoption, user training, and migration**																	
	Provide on site support for a period of 12 months																	
	* All tasks are as per Year Two work plan amendment #2																	
	** Delays first reported in Year Three fourth quarterly report																	

Legend

	Time frame as planned
	Delays, as indicated in Year Four Workplan
	Additional delays, detailed in quarterly report

Component 4: Capital Investment Planning and Program/Project Management

There are no component four activities with BMLWE in the year-four work plan.

Component 5: Procurement of Technical Equipment to Strengthen WEs

Work Plan Activity

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
5.2	Upgrading Pumping and Energy Efficiency			
5.2.5	Establish service agreements, and conduct user training programs for the equipment provided in the Jeita pump station	- CDM (BG, GT), DAI (MK) - Local subcontractors (Geobaco)	- Activity completed	September, 2013

BG-Bassem Ghayda; GT-Gulnard Ters; MK-May Koleilat

Activity 5.2 - Upgrading Pumping and Energy Efficiency

All equipment (pumps, motors, motor control centers, and valves and fittings) was delivered at the end of year three and throughout the first quarter of year four. The BMLWE engineers were responsible for the installation of the new equipment at Jeita pump station. During and after installation, the suppliers will provide on-the-job training and guidance to WE staff on operation of the equipment and on the preventive maintenance required. As of the end of February, all the sets of pumps and motors were installed, tested, commissioned, and operated. The LWWSS program engineers conducted site visits to ensure that the installation and testing of the 16 pumps, 16 motors, and 4MCCs was being implemented according to CDM's recommendations. This activity was completed in February 2013. In March, the DAI President, Mr. Jim Boomgard, and the DAI Chief Financial Officer, Mr. Mike Jacobowski conducted a site visit with the LWWSS Chief of Party to the Jeita pump station which has been rehabilitated. See photo below.



Right to Left: DAI CFO, LWWSS COP, and DAI President at Jeita pump station.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-1 (FY10)												Y-2 (FY11)												Y-3 (FY12)												Y-4 (FY13)											
		Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4			Q1			Q2			Q3			Q4														
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S												
5.2	Rehabilitating the Jeita Pump Station																																																
	Activity introduced*																																																
	Investigation, Survey and data gathering* **																																																
	Bidding documents and specifications**																																																
	Procurement and orders placed**																																																
	Manufacturing and delivery of pumps***																																																
	Procurement, manufacturing and delivery of valves***																																																
	Procurement, manufacturing and delivery of electrical panels***																																																
	Procurement, manufacturing and delivery of fittings***																																																
	Oversight on installation (by BMLWE), training on O&M of equipment****																																																
	* Year-One Work Plan																																																
	** Tasks scheduled in the Year-Two Work Plan																																																
	*** Tasks scheduled in the Year-Three Work Plan																																																
	**** Tasks scheduled in the Year-Four Work Plan																																																

Legend

 Time frame as planned

Component 6: Small- to Medium-Scale Infrastructure Water and Wastewater Projects

There are no component six activities with BMLWE in the year-four work plan.

Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach

Work Plan Activity

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
7.6	Consumer-Targeted Awareness Programs			
7.6.3	Outreach material promoting public awareness and education on water conservation	- EMC (NA) - Local subcontractor (TBD)	- Activity completed	March, 2013

NA-Nada Akl

Activity 7.6 - Outreach material promoting public awareness and education on water conservation

This national outreach activity applies to several WEs. As such, for details, refer to activity 7.6 within component 7 of BWE's work plan above.

3. North Lebanon Water Establishment (NLWE)

Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

Work Plan Activity

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
2.3	Build Pump Stations Operators Capacity in Operation and Maintenance			
2.3.2	Pump station operators advanced training in O&M	- DAI (MK) - Kredo	- Activity started	Dec, 2012

MK-May Koleilat

Activity 2.3 – Building Operators' Capacity in Operation and Maintenance of Pump Station Equipment

This activity was completed in November 2012, as per the year four work plan.

Component 3: Increase Financial and Commercial Viability of Water Establishments

Work Plan Activities

Item	Activity Description		Outcome by End of	Target Date
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		Program Resource	Year Four	
3.1	Upgrade Finance and Accounting Standards and Methods			
3.1.2	Training in Public Accounting, Finance, Procurement, Auditing	EMC (MC)*, LWWSS (MK)	Training completed Follow-up in place	April, 2013
3.1.6	Develop procedures and a standard manual for internal audit within the WE, and conduct applied training to key departments.	EMC (MC), DAI (AS), ABA	Procedures defined, manual produced, training conducted.	September, 2013

MC-Mike Chalah; MK-May Kolielat; AS-Ahmad Siddik; ABA-Allied Business Advisors

3.1.2 - Training in Public Accounting, Finance, Procurement, Auditing

This activity is a continuation of the year three group of activities relating to an update of the financial and analytical accounting methods in NLWE, through a new chart of accounts and the introduction of the concept of cost and profit centers. A period of time is necessary to ensure that the NLWE finance department staff have adequately applied the new chart of accounts and the cost and profit cost center concept application prior to providing additional training. This training was rescheduled until the middle of year four based on LWWSS' communication and agreement with NLWE Director General. The training relates to matters of public accounting, accrual based accounting, procurement and auditing, and augments the capacity of the WE staff to adopt accrual accounting standards while meeting the government of Lebanon's requirements and regulations.

The Request for Proposal (RFP) for the public finance and accounting management training courses was finalized and launched in early December. The vendor Tago was selected for the public finance and accounting management training courses and a contract was signed with them in January. A meeting was then held at the end of January with the financial director of NLWE to discuss the number of trainees, the tentative start date, and the content of the training.

The 12-day training targeting 28 trainees working in the Financial and Accounting department at the NLWE training started on February 22, 2013 at the rate of 2 days per week. The first two modules were conducted in February 2013, while the third and fourth modules were conducted on 1, 2, 8, and 9 March 2013. Sessions were interrupted due to the prevailing security events at Tripoli. The remaining two modules will be conducted in April 2013.

The training modules are the following:

- Introduction to public financial management and budget preparation
- Budget execution
- Public accounting and financial reporting
- General accounting and financial analysis
- Public procurement
- Taxation and financial reports

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	2 (FY1	Y-3 (FY12)					Y-4 (FY13)				
		Q4	Q1	Q2	Q3	Q4		Q1	Q2	Q3	Q4	
		J A S	O N D	J F M	A M J	J A S		O N D	J F M	A M J	J A S	
3.1.2	Training in Public Accounting, Finance, Procurement, Auditing											
	Activity introduced*											
	Staff interviews, training needs assessment											
	Training in Public Accounting, Finance, Procurement, Auditing**											
	Define cost centers, create/update chart of accounts, and procedures											
	Develop RFP and procedures for asset and inventory identification and valuation											
	* Year-Three Work Plan											
	** As reported in the Year Four Work Plan											

Legend

	Time frame as planned
	Delays, as indicated in Year Four Workplan
	Additional delays, detailed in quarterly report

3.1.6 - Develop procedures and a standard manual for internal audit within the WE, and conduct applied training to key departments

As per the year four work plan, LWWSS will assist NLWE in developing a thorough Internal Audit Manual that will cover all aspects of audit controls dictated by the by-laws and the legislation applicable to the WEs, in order to improve detection, corrective and preventative controls within the WE. The effort would also allow the WE to conduct an operational review of performance on a yearly basis, thereby providing the WE management with powerful tools to monitor the WE's performance and compliance. As part of this activity, LWWSS and NLWE will work to assign staff to lead the process of internal auditing, conduct comprehensive training on the manual's contents and processes.

During the second quarter, LWWSS' Finance Specialist Mike Chalah and LWWSS' subcontractor ABA began their work on the internal audit manual which will be composed of several sections, including the following:


1. Introduction and Departmental level mission statement
2. Internal Audit Agreement
3. Ethics
4. Team Training
5. Financial Management & Internal Controls
6. Strategy & Planning
7. Methodology
8. Quality Control
9. Policies & Procedures

The first draft of the manual was completed during the second quarter of year four, and will be reviewed by NLWE. During the third quarter, a final copy of the manual will be issued, as well as a training for NLWE's finance team for about 10-15 people (financial manager, 7 supervisors, and 7 Accountants).

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-3 (FY12)					Y-4 (FY13)											
		Q3					Q4											
		Q1					Q2											
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
3.1.6	Develop procedures and a standard manual for internal audit																	
	Activity introduced																	
	Review NLWE requirements and define key best practices																	
	Draft audit manual, review and issue to NLWE																	
	Conduct training, incorporate any revisions, and issue final copy																	

Legend

 Time frame as per Year Four Work Plan

Component 4: Capital Investment Planning and Program/Project Management

There are no component four activities with the NLWE in the year-four work plan.

Component 5: Procurement of Technical Equipment to Strengthen WEs

Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Four	Target Date
5.2	Upgrading Pumping and Energy Efficiency			
5.2.3	Test and design the replacement nine submersible pumps and associated works	- CDM (BG, GT, EH) - Local subcontractor (TBD)	Tests completed and design produced	June, 2013
5.2.4	Supply and install the replacement nine submersible pumps and associated works	- CDM (BG, GT, EH) - Local subcontractor (TBD)	Procurement stage; contract placed	September, 2013
5.3	Increasing Supply Hours to Areas Facing Supply Shortage			
5.3.1	Supply and install up to 9 back-up generators for key NLWE stations	- CDM (BG, GT, EH) - Local subcontractor (TBD)	- Manufacturing and shipping done; - Installation substantially complete	September, 2013
5.3.2	Establish service agreements and conduct user training program for these generators	- CDM (BG, GT, EH), DAI (MK) - Local subcontractor (TBD)	- Activity commenced	September, 2013

BG-Bassem Ghayda; GT-Gulnard Ters; MK-May Koleilat

Activity 5.2 - Upgrading Pumping and Energy Efficiency

As per the year four work plan, the LWWSS program will be installing nine pumps in the following stations:

a- Tripoli area:

- Abou Halqa spring (one pump)
- Manar tank (one pump)

- b- Qobayyat
 - Kfartoun (one pump)
- c- Batroun
 - Kfarhelda - Der Bella station (one pump)
 - Mar Yaacoub (one pump)
- d- Halba
 - Al Ouyoun (four pumps located in wells)

Throughout the second quarter, the LWWSS program engineers continued their inspections of existing pumps for the Tripoli, Qobayyat, and Batroun areas, as well as finalizing the SOW, technical specifications, and BOQ for these pumps which will be incorporated into the RFP for this activity. A kick-off meeting and a site visit with the subcontractor ELARD took place in January regarding the well assessment tests for the four pumps to be replaced in Al Ouyoun.

After the kick-off meeting, site preparations were underway to start the well assessment tests for the four pumps to be replaced in Al Ouyoun. Well inspection was conducted via closed captioned television (CCTV) of the well casing and screen to the bottom of each well, and an alignment test was implemented accordingly. In March, a drawdown test and a constant flow test were implemented for the Al Ouyoun N1 well.

It is to be noted that the security situation in North Lebanon has caused some delays in site visits. However, since these delays are constricted to a limited number of days, they do not affect as such the general timeline of the activity, but constitute as a contributing factor in addition to the delays caused by the different activity tasks as reported in monthly and quarterly reports.

As such, the well assessments will continue throughout April 2013, after which the design for the rehabilitation can start. Once the design is completed, the procurement of the pumps can commence.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY'11)					Y-3 (FY'12)					Y-4 (FY'13)					Y-5 (FY'14)												
		Q3		Q4			Q1		Q2			Q3		Q4			Q1		Q2			Q3		Q4					
		M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
5.2	Upgrading Pumping and Energy Efficiency																												
	Activity introduced*																												
	Survey and data gathering*																												
	Bidding documents and specifications*																												
	Procurement*																												
	Activity rescheduled based on findings regarding NLWE's data quality**																												
	Complete assessment and design for pumps**																												
	Confirm costing and start testing ahead of procurement**																												
	Start procurement process for manufacturing and installation**																												
	Activity rescheduled due to delays with procurement of well-test package***																												
	Complete well assessment and obtain well test results***																												
	Finalize design, confirm costing and start procurement***																												
	Manufacturing and installation***																												
	* As planned in Year-Two Work Plan Amendment #3 dated June 24th, 2011																												
	** As planned in Year-Three Work Plan																												
	*** As detailed in Year-Three fourth quarterly report and Year-Four Work Plan																												

Legend

	Time frame as planned
	Delays, as indicated in Year Four Workplan
	Additional delays, detailed in quarterly report

Activity 5.3 - Increasing Supply Hours to Areas Facing Supply Shortage

During the second quarter, the LWWSS program engineers continued their site inspection visits for each of the pump stations that will receive back-up generators:

- Hab
- Aayrouniyeh
- Nakhle
- Bqerqacha
- Beshmezzin
- Qbayyet
- Kfartoun
- Rahbeh

Excavation and other preparatory work are on-going at several of the sites and all generator orders were placed. Two of the generators are in Lebanon, three have been ordered from the US, and three have been ordered from France. The reason is that the KOHLER power systems have discontinued most of their 50Hz under 300KW Genset production in the United States, as they are now built by Kohler at its plant in France. Therefore, the three discontinued models have been ordered from France.

The US- and French-made generators will be delivered in the third quarter of year four and then installed. Manufacturing of the generators is in progress. Preparation work at the sites will continue until the generators are delivered.

Furthermore, Edan Group sent the bill of lading, packing list, commercial invoice and certificate of origin for the shipment of the generators fuel tanks accessories in mid-March 2013. A request has been sent to the D.G. of NLWE requesting a special permit to the General Directorate of Customs to clear the equipment without payment of customs duties. By end of March the letter has been received and the vendor is currently clearing the goods from Beirut Airport.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY'11)		Y-3 (FY'12)				Y-4 (FY'13)			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		A M J J A S	O N D J F M A M J J A S	O N D J F M A M J J A S	O N D J F M A M J J A S	O N D J F M A M J J A S	O N D J F M A M J J A S	O N D J F M A M J J A S	O N D J F M A M J J A S	O N D J F M A M J J A S	O N D J F M A M J J A S
5.3	Increasing Supply Hours to Areas Facing Supply Shortage										
	Activity introduced*										
	Survey and data gathering*										
	Bidding documents and specifications*										
	Procurement*										
	Activity rescheduled based on findings regarding NLWE's data quality**										
	Complete assessment and design for generators**										
	Confirm costing and start procurement process**										
	Place procurement orders for manufacturing and installation**										
	Activity implementation: supply and installation of generators**										
	* As planned in Year-Two Work Plan Amendment #3 dated June 24th, 2011										
	** As planned in Year-Three Work Plan and continuing in the Year-Four Work Plan										

Legend

 Time frame as planned

Component 6: Small- to Medium-Scale Infrastructure Work

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
6.2	Expanding Service Provision to Non-Served Areas			
6.2.1	Beit Mellat, Akkar, North Lebanon: Design metered house connections to up to 12 villages	LWWSS (Infrastructure PM) Local Engineering Firm (TBD)	- Design completed	October, 2013
6.2.2	Beit Mellat, Akkar, North Lebanon: Implement house connections to up to 12 villages	Local Engineering Firm (TBD) Local subcontractor (TBD)	- Procurement completed; Subcontractor appointed	January, 2014

Activity 6.2 - Decreasing Water Losses and Upgrading Existing Networks

The consent to subcontract Kreda for the design and supervision of the rehabilitation of a water supply network in Beit Mellat was received on February 6, 2013. The Subcontract Agreement was signed on February 19. The almost four-month delay incurred during the procurement process was caused by the need to request a resubmission based on BAFO between two bidders, as well as administrative delays by DAI and CO contracting offices. This delay affects the general timeline of this engineering consultancy activity by two months.

A kick-off meeting was held on February 21, followed by a startup meeting on February 27 at the NLWE offices with the NLWE Director General Mr. Jamal Krayem and his staff, Kreda and the LWWSS team to discuss the scope of work. During the meeting, it was agreed that Kreda will start the assessment and design of the Bebnine network, and carry on to the design of the remaining villages as the budget allows. The DG announced that NLWE will take on rehabilitation of the remaining villages that could not be covered by LWWSS' scope of work due to insufficient funding.




Consequently, the assessment and design of the Bebnine network started early March and is ongoing. In this regard, a meeting was held on March 19, 2013 in the offices of NLWE with Kreda, the LWWSS team, and the NLWE DG and his staff. The meeting served to review the progress of work on the Design and Supervision of the Rehabilitation of the Water Supply Network in the Beit Mellat region.

During the meeting, Kreda informed the attendees about the difficulties being encountered in gathering data on the existing water network to be rehabilitated in Bebnine. A large part of these difficulties would be overcome with the cooperation between Kreda, NLWE and GIZ (former German technical assistance to NLWE). As an outcome of the meeting, NLWE shared a survey which was conducted by GIZ on the water network, to be used by Kreda in filling information gaps. The study surveys the location of existing networks, and includes results of a house counting conducted in 2011.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY'11)					Y-3 (FY'12)					Y-4 (FY'13)					Y-5 (FY'14)					Y-6																						
		Q3		Q4			Q1		Q2			Q3		Q4			Q1		Q2			Q3		Q4			Q1		Q2															
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M		
6.2	Expanding Service Provision to Non-Served Areas: Beit Mellat																																											
	Activity introduced*																																											
	Hiring personnel, technical investigation of project parameters																																											
	SOW, procurement and appointment of engineering subcontractor**																																											
	Starting design and preparation for procurement of the works**																																											
	Detailed design period and bid preparation period																																											
	Procurement and appointment of infrastructure works contractor																																											
	Site implementation period																																											
	* Year-Three Work Plan																																											
	** Delayed by Three Months as per the Year-Four Work Plan																																											

Legend

-  Time frame as planned
-  Delays, as indicated in Year Four Workplan
-  Additional delays, detailed in quarterly report

Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
7.3	Develop Tools and Support WEs in Adopting Corporate Communication			
7.3.2	Design and Implement WE Corporate Website	EMC (NA), Local subcontractor (TBD)	- Activity completed	May, 2013
7.6	Consumer-Targeted Awareness Programs			
7.6.3	Outreach material promoting public awareness and education on water conservation	- EMC (NA) - Local subcontractor (TBD)	- Activity completed	March, 2013

NA – Nada Akl

Activity 7.3 –Designing and Implementing WE Corporate Website

The corporate website for the North Lebanon Water Establishment will be browsed and used by the public citizens of North Lebanon, particularly those who are connected to the water network. The website will be in 3 languages: Arabic, French and English with the Arabic site being the default site. The website will include the technology of a dynamic content management system allowing the NLWE non-technical staff to easily and cost effectively update content and modify page layouts after the initial launch.

The subcontract to design, develop, and host the NLWE's corporate website was signed at the end of November 2012, and the Netways began work in December 2012. As reported previously, there was a delay with the website design approval phase because the NLWE team was not satisfied by the initial design options proposed by Netways. Additional design options were requested from Netways with further modifications to the ones they had already proposed, followed by a conference call between NLWE project team, LWWSS, and Netways.


In January, the functional specifications document was finalized by Netways and reviewed and approved by the LWWSS team. Also, the final draft of the design document was received by the LWWSS program and NLWE at the end of the month. After that, a meeting was conducted in February with NLWE's Director General (DG) to go over and finalize the design. Furthermore, the English content of the website which was prepared by the LWWSS program was reviewed with NLWE for comments and input.

During March, Netways started developing the English beta version of the website based on the agreed upon functional specifications and design. The first draft of betas version will be shared with LWWSS and NLWE in April 2013. On the other hand, the NLWE staff worked on gathering data and forms in order to incorporate their input into the English draft content prepared by LWWSS.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-3 (FY'12)					Y-4 (FY'13)											
		Q3					Q4											
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
7.3	Designing and Implementing WE Corporate Website																	
	Activity introduced																	
	Website design and implementation																	
	Prepare for website activity launch																	
	Appoint website design supplier																	
	Implement website and go live																	

Legend

 Time frame as per Year Four Work Plan

Activity 7.6 - Outreach material promoting public awareness and education on water conservation

This national outreach activity applies to several WEs. As such, for details, refer to activity 7.6 within component 7 of BWE's work plan above.

4. South Lebanon Water Establishment (SLWE)

Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
2.1	Establishing and Building the Capacity of Metering Teams			
2.1.1	Assist in identifying metering teams and assess training needs	- CDM (BG, GT, IN) - DAI (MK) - ValuAdd	- Activity conducted	September, 2013
2.1.2	Provide management team and field team training on metering	- CDM (BG, GT, IN) - DAI (MK)	- Activity conducted	September, 2013
2.1.3	Provide technical assistance (studies, training, study tours) and/or technological tools for water demand management	- DAI (TBD) - ValuAdd	- Activity conducted	September, 2013
2.3	Build Pump Stations Operators Capacity in Operation and Maintenance			
2.3.1	Pump station operators basic O&M and H&S training	- DAI (MK) - Kreda	- Activity conducted	September, 2013

BG-Bassem Ghayda; GT-Gulnard Ters; IN – Ihab Nasr; MK-May Koleilat

Activity 2.1 – Establishing and Building the Capacity of Metering Teams


As per the year four work plan, the source metering installation activity will include training on water meter operation and maintenance for the pump station personnel to maximize the impact of this activity.

This activity will commence when field progress has been achieved on the source metering procurement activity (activity 5.1), i.e. around the middle of year four. This sequencing is necessary given that this activity is a follow-up to activity 5.1. Establishing and training metering teams is closely associated with the ongoing meter installation given that, in order to draft a metering strategy, assign teams and provide training, everything must link to the actual metering infrastructure that awaits installation.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY'11)					Y-3 (FY'12)								Y-4 (FY'13)															
		Q3					Q4				Q1				Q2				Q3											
		Q4					Q1				Q2				Q3				Q4											
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
2.1	Establishing and Building the Capacity of Metering Teams																													
	Activity introduced																													
	Assist in identifying metering teams and assess training needs																													
	Provide management and field team with training on metering																													
	Propose provision of tools for demand management																													

Legend

 Time frame as per Year Four Work Plan

Activity 2.3 – Capacity Building in Operation and Maintenance of Pump Stations

During years two and three, the LWWSS program implemented a group of successful activities that built the capacity of pump station operators in the areas of operation, maintenance, health and safety in both NLWE and BWE. The LWWSS program recently received a request from SLWE to conduct a similar training in South Lebanon.

SLWE operates approximately 220 water production, treatment and pumping sites, and as such, the requested capacity building activity has the potential to substantially enhance the effectiveness and safety of water supply practice in the South Lebanon region.

The proposed training course is already prepared in a template format by the LWWSS engineering training team. It is ready for customization to meet the need of SLWE. It consists of three to five days of in-class and on-site training, covering all the basic aspects of operating and maintaining a pump station, including:

- Operating the mechanical and electrical equipment;
- Cleaning and maintaining the equipment;
- Electrical, hydraulic and chemical health and safety procedures;
- Facility management basics;
- Chlorinator reading and operating basics;
- First aid.

Overall, the activity includes the following sequence of tasks:

- Interviewing the SLWE management, as well as the employees that are proposed for the training, and assessing their specific training needs;
- Confirming and agreeing the course details, to suit the profiles of the selected persons and their identified skills and needs;
- Conducting the training, both on-site and in classrooms, as well as the post-training evaluation;
- Certificate distribution;

- Continuing evaluation and follow-up.

In March, the LWWSS Capacity Building Specialist Ms. May Koleilat met with the SLWE DG, Mr Ahmad Nizam, in order to discuss the training program and the estimated number of participants. In the meeting, Mr Nizam has re-iterated his interest in the activity. However, training preparations are still pending the approval of Kreda's contractual agreement.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	(FY	Y-4 (FY13)													
		Q4			Q1			Q2			Q3			Q4		
		A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
2.3	Capacity Building in O&M of Pump Stations															
	Activity introduced*															
	Staff interviews															
	Course preparation															
	Conduct training															
	Evaluation and follow-up															
	* Year-Four Workplan															

Legend

	Time frame as planned
	Delays detailed in quarterly report

Component 3: Increase Financial and Commercial Viability of Water Establishments

There are no component three activities with SLWE in the year four work plan.

Component 4: Capital Investment Planning and Program/Project Management

Item	Activity Description	Program Resource	Deliverable by End of Year Three	Timeframe
4.2	Implement Asset Survey, Inventory and Valuation			
4.2.4	GIS training for pump-station managers/operators	- EMC (MC), DAI (MK) - Cadres	- Activity completed	June, 2013

Activity 4.2 - Implementing Asset Inventory and Valuation

This activity is a follow up to the Year three activity for SLWE under component 4: Implementing Asset Inventory and Valuation. Its main objectives are to organize and integrate the data collected by Cadre on the SLWE pumping stations into GIS, and to develop customized tools to manage and maintain these data in a systematic and user-friendly interface.

The activity started with an analysis of the project requirements and review of current geodatabase and data. The GIS specialist, Wassim Katerji, then reorganized the Cadre database and integrated it within the SLWE geodatabase.

After that, the consultant developed the tools for viewing and updating pumping stations data, generating statistical and maintenance history reports, generating customized filtered reports, as well as importing and exporting data respectively from CAD to GIS, and from GIS to WaterCAD.

Following the tools development and installation at the SLWE, it was decided that a training in GIS application for personnel from the 7 branches of the SLWE is needed to ensure sustainability of the data and keep it up to date. One engineer and one pumping station operator from each of the SLWE seven branches will be trained on the use of the GIS system. Training will start at SLWE in April and continue throughout June 2013. Subsequently, the consultant will provide post-installation support on the new tools.

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-3 (FY'12)				Y-4 (FY'13)			
		Q3		Q4		Q1		Q2	
		J	J	A	S	O	N	D	J
4.2	Implementing Asset Inventory and Valuation								
	Activity introduced*								
	Data migration from Access to arcGIS								
	Tools development and deployment in main branch								
	Deployment and training for pump station managers/ operators in the 7 branches								
	Go-live and post-installation support								
	* Year-Three Work Plan								

Legend

	Time frame as planned
	Delays detailed in quarterly report

Component 5: Procurement of Technical Equipment to Strengthen WEs

Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Four	Target Date
5.1	Identifying Water Production and Contributing to Water Demand Management			
5.1.1	Supply and install up to 218 production meters, fittings and protection box/manhole (all non-metered sources in WE)	- CDM (BG, GT) - Modon Group	- Activity substantially complete	September, 2013
5.1.2	Establish service agreements, conduct training and complete meter reading	- CDM (BG, GT) - Modon Group	- Activity started	September, 2013
5.4	Upgrading Water Analysis Laboratories			
5.4.3	Supply the lab with consumables	- DAI (EH), Numelab, Multilab	- Activity completed	April, 2013
5.4.4	Conduct user training program on the atomic absorption instrument	- DAI (MK)	- Activity completed	September, 2013
5.6	Increase IT Infrastructure Efficiency			

5.6.2	Upgrade server installation and power supply infrastructure at head office and selected branches	- DAI (AS) - Local subcontractor (MDS + TBD)	- Activity completed	September, 2013
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BG-Bassem Ghayda; GT-Gulnard Ters; IN – Ihab Nasr; AS – Ahmad Siddiq

Activity 5.1 - Identifying Water Production

The source metering work continued on track throughout the second quarter. Modon continued civil site works at several of the pump stations where manholes and rectification works are required before the installation of flow meters. Modon's submittals were finalized after review by the LWWSS program engineers, who are continuing their site inspections at sites where manholes and rectification works are being done. The LWWSS program engineer Ihab Nasr is working closely with Modon, spending most of his time working in the field supervising Modon's work.

In January the LWWSS Chief of Party and the LWWSS Bethesda-based Project Manager conducted site visits with the SLWE Director General and Modon to several of the pump stations where source meters will be installed. See photos below.

In mid-March, 19 Ultrasonic flow meters, and 224 turbine meters were delivered to SLWE. The procurement of mechanical flow meters faced delays from the manufacturer in the USA. The delay in receiving the mechanical flow meters was due to complications with the Letter of Credit (LC) which necessitated the inclusion of a statement required by the Lebanese Government on barring the vessel carrying the shipment from docking at Israeli ports. However, the vendor confirmed that the flow meters will be shipped by second week of April from the US port, and will be arriving to Lebanon before the end of April 2013. Installation will start in April.

The activity continues post-installation and includes a year-long meter reading service by the supplier, in addition to warranty and service of supplied equipment. A follow-up for this activity continues under activity 2.1, above. It is estimated that task 5.1.2 of this activity (maintenance, warranty, and meter reading for a period of one year per completed site) will extend into until April 2014 at the latest.



Protection box construction at
Addousieh Pump Station



Protection box construction at
Jib Sheet Pump Station



Nabeh el-Tassi Pump Station

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-1 (FY10)					Y-2 (FY11)					Y-3 (FY12)					Y-4 (FY13)													
		Q3		Q4			Q1		Q2			Q3		Q4			Q1		Q2			Q3		Q4						
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
5.1	Identifying Water Production																													
	Activity introduced*																													
	Specification Stage																													
	Bidding documents consolidated																													
	Procurement started																													
	Complete specifications; Start procurement**																													
	Place subcontract for supply and installation																													
	Place orders; Start installation on site																													
	Conduct meter reading																													
	* Introduced in Year-Two																													
	** Rescheduled due to procurement delays (Year-Three)																													

Legend

	Time frame as planned
	Delays, as indicated in Year Four Workplan

Activity 5.4 – Upgrading Water Analysis Laboratories

This activity relates to the conclusion of the year-three group of activities relating to the installation of key equipment in SLWE's water analysis laboratories in Saida, Sour (Tyre) and Nabatieh. The service period for the laboratory equipment began in April 2012 and continued through March 2013. The service period includes the following:

- Service and maintenance visits by the subcontractor Numelab (minimum number of visits is one visit to each laboratory per quarter);
- All follow-up training required to ensure staff are up-to-date on the operation, maintenance, and health and safety conditions;
- Attendance to any calls for repair by the Water Establishment;
- Full equipment check-up, inspection, corrective actions, and routine maintenance tasks of the equipment, to ensure the equipment is in highest working condition.
- Any required equipment calibration or re-calibration to meet the manufacturer's and best practice requirements;
- All equipment consumable parts throughout the service period;
- All replacement and repair costs and associated labor;
- All software or firmware updates;
- Ensuring the equipment and parts are fully functional, as they were delivered to the client upon commissioning; and
- Phone support throughout the service period.

As a follow up to the year three activities, and after an RFP for the lab consumables was launched on 24 September 2012, one bid proposal was received by the deadline of October 10, 2012. After having received one offer for this RFP, the evaluation committee decided to allow all other bidders to submit partial bid proposals, due to the fact that the bidders could not supply each alone all the consumables and equipment as requested in the RFP. Following this decision, the five bidders who were issued the RFP were informed that partial bid proposals will be accepted. As a consequence, two bid proposals were received on October 25, 2012.

In November 2012, the evaluation committee reviewed the technical submittal of the bidders, followed by a second review with the CDM Smith engineer. The evaluation committee decided to split the procurement between two bidders, Multilab S.C.S. (amounting to LBP 14,764,000) and Numelab (amounting to LBP 29,409,460).

The purchase order for both vendors was prepared in mid-December 2012, with a delivery schedule of 14 weeks (30 March 2013). On March 28, 2013, both Numelab and Multilab S.C.S. delivered the consumables to SLWE laboratory, with the exception of a few consumables that remain to be delivered by Multilab by April 12, 2013.

Furthermore, a short meeting was held between the LWWSS Capacity Building Specialist Ms Koleilat and the Head of the SLWE laboratory Mrs Chidiac at her office in Saida. It was agreed that Mrs Chidiac will present an action plan in April for the water analysis tests on the Atomic Absorption instrument.

Timeline

Work Plan Item	Work Plan Activity Title; Activity Stages	Y-2 (FY11)				Y-3 (FY12)				Y-4 (FY13)			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		O N D J	F M A M J	J A S	O N D J	F M A M J	J A S	O N D J	F M A M J	J A S	O N D J	F M A M J	J A S
5.4	Upgrading Water Analysis Laboratories												
	Activity introduced*												
	Finalize procurement and award contract to supply lab consumables												
	Deliver lab consumables												
	Conduct testing on the atomic absorption instrument												
	* Year-Two Work Plan												

Legend

	Time frame as planned
	Delays

Activity 5.6 – Increasing Information Systems Infrastructure Efficiency

The IT equipment order was placed in December. The new infrastructure (servers and related equipment) were delivered and installed at the SLWE in March 2013 instead of February 2013, due to delays at the Lebanese customs.

On the other hand, the SLWE DG is very keen on installing the MS NAV software instead of the JD Edwards software and has asked the LWWSS program for assistance in doing so. The program is getting cost estimates and verifying if there are savings in the budget. If available, a request will be sent to USAID for approval.

Timeline

Work Plan Item	Work Plan Activity Title; Activity Stages	Y-2 (FY11)		Y-3 (FY12)				Y-4 (FY13)		
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
		A M J	J A S	O N D	J F M	A M J	J A S	O N D	J F M	A M J
5.6	Increasing Information Systems Infrastructure Efficiency									
	Activity introduced									
	Finalize specifications, start procurement for server upgrades									
	Upgrade server installation and other key IT infrastructure									
	Finalize specifications, start procurement for server upgrades									
	Conduct the procurement of the server infrastructure in SLWE									
	Supply and install servers and other key IT equipment; conduct training									

Legend

	Time frame as per Year Four Work Plan
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Component 6: Small- to Medium-Scale Infrastructure Work

Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Four	Target Date
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6.3	Pump Station Infrastructure Rehabilitation			
6.3.1	SLWE: Test and design pumps, motors and associated works for the rehabilitation of selected stations	- CDM (and their subcontractor DEP)	- Activity completed	February 2013
6.3.2	SLWE: Supply and install pumps, motors and associated works for the rehabilitation of selected stations	- CDM (and their subcontractor DEP) - Local subcontractor (TBD)	- Infrastructure contract placed; works commenced	December, 2014

Activity 6.3 – Upgrading Pumping and Energy Efficiency

This activity includes the design and rehabilitation of up to three pump stations in South Lebanon - Ouadi Jeelo, Al Shehabieh, and Batoulay. The rehabilitation will include upgrading pumps and associated equipment that are located in the booster pump stations at all three of these stations, as well as upgrading pumps that are inside wells that are located in the vicinity of the Ouadi Jeelo and Batoulay stations, where necessary. These wells pump water to the reservoirs at the booster pump stations. It must be noted that the project budget and available funding for this work (\$2,320,000) was simply an amount of money allocated to SLWE for work at these pump stations. There could not be an accurate estimate of how much work could be done for this amount, until all of the three facilities were examined, tested, and preliminary designs drawn up to compute approximate quantities and costs. Normally, this info is gathered during a concept design stage, which did not occur in this instance due to time and funding constraints. The said pumps stations are operationally very complex stations.

The LWWSS Program proceeded with the preliminary field investigation and engineering design for all three pump stations, however, as the design stage proceeded and engineer's estimates were produced, it became clear that there would be insufficient budget to fund the replacement of pumps and upgrade all three of the large pump stations. The total estimated cost to fully rehabilitate all three pumps stations was \$3,234,881. Therefore, together with the SLWE, it was decided to tender out only two of the three pump stations, and the Director General would seek other funding or donors for the Al Shehabieh pump station.

This re-distribution of responsibilities guarantees SLWE a complete rehabilitation of their most essential stations: Ouadi Jeelo and Batouley, and allows SLWE to internally conduct essential repairs within Shehabieh, while awaiting the identification of a donor or a source of funding that would cover the complete rehabilitation of Shehabieh, using the detailed design prepared by the LWWSS program.

The Ouadi Jeelo and Batouley pump stations will provide improved service to an estimated population of 31,462 and 40,444 respectively.

By the end of January, the LWWSS team was finalizing the preparations for the bidding of the works on the two key stations, and held meetings with USAID/WISE project to help the WISE team investigate the possibility of leveraging WISE funding to complete the works in the Shehabieh station.

In early-February, the LWWSS team visited the pump station sites for the development of the Environmental Mitigation and Monitoring Plan (EMMP) which was prepared and finalized by LWWSS. In mid-February, The LWWSS team completed the design drawings, specifications, and BoQs for each of the three major booster pump stations: Ouadi Jilo, Chehabieh, and Batoulay.

The invitation to local construction subcontractors for collecting the RFP packages for Ouadi Jilo and Batoulay pump stations was advertised in two major newspapers (An-Nahar and Al-Balad) on February 18th, 19th, and 20th. The RFP was also issued to 18 firms on February 21.

In late-February, CDM Smith was able to locate an appropriate landfill that falls within proximity of Ouadi Jilo and Batoulay pump stations. The landfill will be utilized for the disposal of any and all construction debris/materials that are produced during the execution phase. This is in compliance to the EMMP requirement.


Pre-bid site visits were held on March 6th and 7th respectively to introduce the interested bidders to both sites of Ouadi jilo and Batoulay pump stations and to enable them to better understand the project and scope. CDM Smith responded to bidder's questions on March 21st, 2013.

The deadline date for bid submission got extended from March 26th until April 2nd, 2013 in order to allow some time for the bidders to provide a "Manufacturer Certification Statement" for the proposed pumps. It is expected that the evaluation will be completed by mid-April 2013 with the selection of the awarded firm to execute the project.

Timeline

Work Plan Item	Wok Plan Activity Title; Activity Stages	Y-2 (FY11)		Y-3 (FY12)				Y-4 (FY13)				Y-5 (FY14)				Y-6									
		Q3		Q4		Q1		Q2		Q3		Q4		Q1		Q2									
		A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M
6.3	Pump Station Infrastructure Rehabilitation																								
	Activity introduced																								
	Local engineer (subcontractor to CDM Smith): RFP stage																								
	Conduct evaluation and appoint engineering subcontractor																								
	Start design stage; issue completed design package																								
	Complete design stage and prepare bids for all stations																								
	Launch procurement for supply of pumps & rehabilitation works																								
	Appoint infrastructure subcontractor; commence works																								

Legend

 Time frame as per Year Four Work Plan

Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach

Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Four	Target Date
7.6	Consumer-Targeted Awareness Programs			
7.6.3	Outreach material promoting public awareness and education on water conservation	- EMC (NA) - Local subcontractor (TBD)	- Activity completed	March, 2013

NA - Nada Akl

Activity 7.6 - Outreach material promoting public awareness and education on water conservation

This national outreach activity applies to several WEs. As such, for details, refer to activity 7.6, within component 7 of BWE's work plan above.

5. Study Tours and Conferences

Item	Activity Description	Program Resource	Outcome by End of Year Four	Target Date
4.3	Build Decision-Makers' Managerial Capacity in Water Utility Management			
4.3.1	Water utility management: conferences, workshops, specialist training and study tours	LWWSS (MK)	- Activities planned and undertaken	September, 2013

MK – May Koleilat

As part of the Year Four Workplan and the Annual Training Plan to build decision-makers' managerial capacity in water utility management (Activity 4.3.1: Water utility management: conferences, workshops, specialist training and study tours), the LWWSS program continued investigating the possibility of planning a study tour with SONEDE (*Société Nationale d'Exploitation et de Distribution des Eaux*) in Tunisia, while exploring other possibilities with other utilities in the region. The program was specifically mindful of potential for learning for the candidates, but also the avoidance of potential political and security risks in Tunisia. Thus, in February, and due to the emerging unstable security situation in Tunisia, the LWWSS program started exploring the possibility for a study tour with Morocco's *Office National de l'Electricité et de l'Eau Potable* (ONEE).

The purpose of this study tour is to familiarize senior staff from the four water establishments with the operation of the water sector in Morocco in general, with specific course and practical work in water management, water distribution, network maintenance, water quality, metering, tariffs, etc. (agenda below). Up to four senior employees from each WE will participate. Invitations will be extended to the DG to nominate heads of distribution networks, senior maintenance staff, senior accounting/financial staff, heads of labs, and heads of water treatment.

In March, the four-day study tour program, which includes orientation to the Moroccan water utility, field visits and practical training courses, as well as the financial offer submitted by ONEE was shared with USAID. The LWWSS program is expecting the USAID approval by April in order to proceed with the preparation of a Training Implementation Plan and other required documentation. The tour is planned to take place during the third week of May 2013

It is worth noting that the study tours and conferences are constrained by the WE personnel's availability and the approvals necessary to allow their foreign travel to take place. During the past year, LWWSS has learned that the WEs faced considerable challenges in obtaining clearance from the MOEW and the Ministry of Foreign affairs, for attending international training and conferences. However, LWWSS will continue to pursue study tours and assist those that should attend to gain approvals for the travel.

D. COLLABORATION WITH DONORS AND GOL OFFICIALS

Donor coordination is an essential part of LWWSS project planning and execution in order to (1) avoid unnecessary duplication, (2) identify specific areas of coordination and (3) identify areas where LWWSS can collaborate with other donors on specific projects or programs. The list of meetings and special events with the GOL and other donors below provides a clear picture of this important program activity.

Meeting with Donor, GOL Official, or Special Event	Date	Attendees	Brief Synopsis of Meeting
Randa Nemmer; World Bank	January 16, 2013	Sam Coxson, Randa Nemmer, Jimmy Zammar, Claire Kfoury, Lee Travers	Discussion of LWWSS technical assistance where the WB could build on USAID efforts
Water Donor's meeting	January 17, 2013	All Major Water and Wastewater donors	World Bank Presentation of its programs and Q&A period
Chemonics/WISE Program	January 29, 2013	Sam Coxson, Bassem Ghayda, Walid Abouzeid, Jacques Bechaalany, Rick Albani, Salah Saliba	Discussion on the work LWWSS is doing with a view to where WISE may build on; sharing of insights relative to working with the four WEs.
USAID	February 5, 2013	Sam Coxson, Mark Peters, Rami Wehbeh, Sana Saliba, Charbel Hanna	Discussion of LWWSS experience in the field and possible areas of continued assistance to the GOL, MOEW and WEs
Joseph Nseir	February 12, 2013	LWWSS ERP Staff and BMLWE FAS and IT Staff	Discussion on progress of ERP on FAS and Billing and Collection

USAID Site Visit	February 13, 2013	Rami Wehbeh, Sana Saliba, Sam Coxson, Bassem Ghayda, Jeita Chief Engineer	Status check on the installation and operation of the 16 pumps and motors and motor control systems at Jeita
USAID	February 26, 2013	Sana Saliba, Sam Coxson, Rana Maalouf	Discussion of overall project progress and specific items of interest
USAID	March 5, 2013	Sam Coxson, Rana Maalouf, Mike Chalah, Rami Wehbeh, Sana Saliba, Charbel Hanna	Discussion of specific progress with BMLWE Billing and Collection ERP module
GIZ/LWWSS	March 7, 2013	Sam Coxson, Rana Maalouf, Manfred Scheu, Ahmad Nizam, Mike Chalah	Discussion of possible assistance to SLWE on IT system change
USAID	March 11, 2013	Sam Coxson, Esther Park	On-site performance audit interview
UNDP	March 22, 2013	Sam Coxson, Rana Maalouf	World Water Day observance at UNESCO Palace

E. CONTRACT DELIVERABLES

- A revised fourth quarter report for year three was submitted in January, as well as a draft of the first quarter report for year four.
- A revised first quarter report for year four was submitted and approved by the COTR in February 2013.
- The January, February, and March monthly reports were submitted to the COTR respectively in February, March, and April 2013.

F. CHALLENGES, PROBLEMS, ISSUES

Resolved Challenge: Operation and Maintenance of the Chlorination Systems in the BWE

Following on the update included in the last quarterly report relating to the supply of consumables, as well as the operation and maintenance of the Chlorination Systems by BWE, during the month of November 2012, the LWWSS team succeeded in assisting the WE in drafting a scope of work for the O&M services and the supply of consumable for these chlorinators. The BWE launched the procurement process which will secure the continuous use and sustainability of this equipment. However, there is still no outsourcing of this activity. The LWWSS team will continue to provide support to assist the WE in continuing to make use of this equipment where needed.

Lack of WE staff availability

The lack in availability of staff remains a challenge within most WEs. Across all the program's components, the LWWSS program is focusing on assisting the WEs with appropriate employee placement and establishing training programs. Training and proper placement are especially applicable for procurement activities. For example, during year-three, LWWSS assisted SLWE in allocating adequate roles and responsibilities of staff within the Saida water analysis laboratory in the South Lebanon Water Establishment (SLWE) and provided these staff with specialist training, to enable optimal resources being dedicated to the atomic absorption meter provided under the program.

Enterprise Resource Planning (ERP) Risks in BMLWE

As mentioned in the first quarterly report for Year 4 and the subsequent monthly reports, the deployment of the ERP has been facing challenges in terms of user adoption, change management and establishing the new platform as the standard tool for operations across the WE. These included instances of:

- Repeated hardware and connectivity breakdowns on BMLWE's hardware infrastructure;
- Lack of continued staff engagement in the WE due to internal issues associated with the politics and the contractual arrangements of the WE staff;
- Lack by WE personnel in meeting agreed milestones for sharing key information associated with migration, such as key customer databases.

The problems continued in the second quarter, most notably with the billing and collection module. Things came to a head in February, when the LWWSS program was informed that BMLWE director general was reporting negative feedback to USAID on the ERP, despite all DAI's effort to successfully complete the project. As a result, the LWWSS team held several meetings with all stakeholders to resolve the issues once and for all.

In a meeting held in March with USAID, BMLWE and EDM, the DG expressed his keenness to have the ERP completed as soon as possible, including the billing and collection module, and requested

that a concrete action plan be devised, which he would support. In a letter to the DG dated March 28, the LWWSS program provided an action plan for concluding the pending activities, and EDM's requirements in terms of BMLWE staff support to be able to meet that timeframe.

Specifically, the status on the risks on the ERP activity in BMLWE is as follows:

- In relation to the six core modules of the FAS: The risk remains that some of the BMLWE staff would not use the new system and that the DG does not sign off on the completed modules. A letter was submitted to the DG on 28 February requesting his sign-off on the FAS modules. By the end of the second quarter, it was not signed.
- In relation to the CRM and billing and collection modules: The risk remains whether or not BMLWE will cooperate to complete the billing and collection module, and whether the module will be adopted by BMLWE and deployed to all the branches. This will be clarified in April, based on BMLWE's response to the letter DAI sent on March 28 (see above).
- In relation to the 20 PCs purchased for BMLWE: 15 have not been delivered yet. These are planned to be installed in the branch offices after the deployment of the billing and collection module. With the risk of this not materializing, a decision would have to be made whether to still hand them over to BMLWE or not.
- As for the risk of the discontinuation of the IT advanced training for key BMLWE staff, it was decided to cancel the training due to lack of interest and time by the trainees. The matter was raised with the provider New Horizon and the LWWSS program is awaiting feedback on the financial implications involved.

To sum up, despite the LWWSS team's efforts to ensure the ERP is successfully completed, there remains important risks in terms of deployment and adoption of the modules, caused mainly by the BMLWE's IT personnel not allocating the time and effort required to achieve the action points allocated to them. Until BMLWE management provides the commitment and support to the project, the timely completion of the ERP, and the sustainability of the modules, remain at risk.

G. STTA DURING QUARTER

During this quarter the following personnel worked on LWWSS as STTA.

Person and Subcontractor	Period of STTA	STTA Activity
Shannon Dugan, DAI	January 4-25 and February 4-16, 2013	<ul style="list-style-type: none"> • Budget Realignment Preliminary Work • Assistance with PMP Files and Records • Internal files Review (personnel, finance)
Philip Giantris, Valuadd	Feb. 24—March 4, 2013	<ul style="list-style-type: none"> • BWE Master Plan Draft Inception Report review and meetings with the BWE DG • Water Metering Strategy For SLWE meeting to develop plan for meter reading after the source metering is installed

H. MAJOR ACTIVITIES PLANNED FOR NEXT QUARTER

BWE Water Establishment Activities

- 2.2 Completion of the on-the-job training of BWE laboratory staff.
- 2.3 Continuation of planning for O&M pump station trainings, contingent upon receipt of approval for extension of Kredo's contract.
- 2.4 Conduct public administration and process management training.
- 2.5 Continuing with Network Maintenance and Repair training needs assessment and training preparations upon approval of Kredo's contract.
- 3.2 Continuation of ERP implementation by conducting Billing and Collection go-live for Baalbek and Chamseen.
- 4.4 Master plan inception report completed and vetted with the BWE Director General and continued work on the master plan.
- 5.4 Award of contract for rehabilitation of Zahle laboratory and delivery of laboratory equipment.
- 6.1 USAID approval and award of contract for construction of Zahle network rehabilitation.

Beirut-Mt. Lebanon Water Establishment

- 3.1 Completion of BMLWE procedures and standards manual for use in budgeting and financial reporting, and training implementation.
- 3.2 The Billing and Collection module as well as CRM are pending consultations with BMLWE.
- 5.2 O&M training implementation for Jeita pump station operators.

North Lebanon Water Establishment

- 3.1.2 Completion of public accounting and finance training.
- 3.1.6 Continuation of work on the Internal Audit Manual and conducting corresponding training.
- 5.2 Continuation of design work on pump station rehabilitation.
- 5.3 Continuation of site preparation work for generator installation and delivery of generators.
- 6.2 Design and supervision of the rehabilitation of water supply network in Beit Mellat.
- 7.3 Obtaining WE input on content and completion of corporate website development work.

South Lebanon Water Establishment

2.3 Continuation of planning for O&M pump station trainings, contingent upon receipt of approval of Kredo's contract.

4.2 Training in GIS application.

5.1 Continuation of source metering work by subcontractor Modon and installation of meters.

5.4 Conducting of SLWE water analysis tests.

5.6 Decision on and implementation of management system software.

6.3 Award of contract for pump station rehabilitation.

I. ENVIRONMENTAL COMPLIANCE REPORTING

The LWWSS Project Environmental Mitigation and Monitoring Plan (EMMP) details the project environmental compliance requirements, as well as including a list of reports for submission to USAID. The primary environmental compliance reporting tool is the Quarterly Report.

The LWWSS EMMP notes that an initial screening form must be completed for each project activity. If the activity is determined to be in category 2, 3, or 4, then an environmental review and assessment checklist (ERAC) and an environmental mitigation and monitoring plan (EMMP) must be completed and approved by the LWWSS COTR.

Initial screening forms were completed for each activity (available in the files of the LWWSS Environmental Specialist), and it was determined that the activities under components 5 and 6 all require ERACs and EMMP. The first table below entitled “LWWSS Environmental Compliance Overview” summarizes the environmental compliance actions for each LWWSS activity. The second table below entitled “LWWSS Environmental Mitigation and Monitoring Actions” details environmental mitigation and monitoring actions for each activity that requires an ERAC and EMMP.

Environmental Compliance Table 1:

LWWSS Environmental Compliance Overview				
Activities (Completed, On-going, and Planned)		Environmental Compliance Actions		
#	Activity Description	Has an initial screening form been completed?	As per the screening form, is an ERAC and EMMP necessary?	Is there an approved ERAC and EMMP (if applicable)?
Component 2				
2.1	Source metering training in SLWE	Yes, see activity 5.1	See activity 5.1	See activity 5.1
2.2	Water quality management in the Bekaa implemented by AUB	Yes	No	N/A
2.3	O&M trainings for pump station operators in BWE, NLWE, and SLWE	Yes	No	N/A
2.4	IT literacy training for BMLWE and BWE	Yes, see activity 3.1	No	N/A

2.5	Network maintenance and repair training for BWE	Yes	No	N/A
Component 3				
3.1	Upgrade finance and accounting standards and methods	Yes	No	N/A
3.2	Enterprise Resource Planning (ERP) platform and associated activities	Yes	No	N/A
3.3	Pilot Stakeholder exercise to sustain O&M of USAID WWTP	Yes	No	N/A
Component 4				
4.1	Business planning for BMLWE and SLWE	Yes	No	N/A
4.2	Pump station inventory in South Lebanon	Yes	No	N/A
4.3	Water utility management: conferences, workshops, specialist trainings and study tours	Yes	No	N/A
4.4	Masterplanning for the Bekaa	Yes	No	N/A
Component 5				
5.1	Source metering installation and training	Yes	Yes	Yes
5.2.1-5.2.2	Jeita pump station rehabilitation	Yes	Yes	Yes
5.2.3-5.2.4	Pump station rehabilitation in North Lebanon	Yes	Yes	No - in Q3 of Y4*
5.3	Back-up power generators for NLWE pump stations	Yes	Yes	Yes
5.4	Upgrading water analysis laboratories in SLWE and BWE (Y3) and rehabilitation of laboratory and equipment purchases for BWE (Y4)	Yes	Yes	-Yes for Y3 activities -No for Y4 activities – sent and awaiting approval from COTR
5.5	Customer Service Center in BWE	Yes	Yes	Yes
5.6	Upgrade IT equipment in BWE and SLWE	Yes	Yes	-Yes for BWE -Yes for SLWE
5.7	GNSS procurement and training for SLWE	Yes	Yes	Yes
Component 6				
6.1	Network rehabilitation in Zahle (BWE)	Yes	Yes	Yes
6.2	Expanding service provision in Beit Mellat (NLWE)	Yes	Yes	No – in Q3 of Y4**
6.3	Pump station rehabilitation in South Lebanon	Yes	Yes	No - sent and awaiting approval from COTR

6.4	Chlorination systems installation and training	Yes	Yes	Yes
Component 7				
7.1	Building customer service management structure at BWE	Yes	No	N/A
7.2.1	Customer Service training at BWE and BMLWE	Yes	No	N/A
7.2.2	On-the-job training in communication planning	Yes	No	N/A
7.3.1-7.3.2	Design and implement WE brand identity guidelines and design and implement corporate website	Yes	No	N/A
7.3.3	Design and adopt customer service application forms	Yes	No	N/A
7.4	Customer satisfaction survey	Yes	No	N/A
7.5	Youth water conservation programs	Yes	No	N/A
7.6.1	Media campaign in the Bekaa	Yes	No	N/A
7.6.2	World Water Day 2012 youth outreach	Yes	No	N/A

ERAC = Environmental Review and Assessment Checklist

EMMP = Environmental Mitigation and Monitoring Plan

* = These EMMPs were originally planned to be completed during Q1 of Y4, but the activities were not finalized during Q1 or Q2.

** = These EMMPs were originally planned to be completed during Q2 of Y4, but the activities were not finalized during Q2.

Environmental Compliance Table 2:

LWWSS Environmental Mitigation & Monitoring Actions		
Activity # (as per Y4 Workplan)	Activity Description	Environmental Mitigation and Monitoring Update (as of March 31, 2013)
5.1	Source metering installation and training	The ERAC and EMMP were approved by LWWSS' COTR at the end of the third quarter of year three.
		An initial EMMP was included in the subcontract with Modon (signed in April 2012), the vendor that is supplying and installing source meters at up to 221 sites. A more detailed EMMP, as well as an environmental mitigation inspection checklist, was given to Modon personnel at the end of the second quarter of year three and discussed in detail with them.
		As per the EMMP, Modon's site supervisor is responsible for ensuring that all mitigation measures are followed and must complete an environmental mitigation inspection at each site. These checklists should be turned in with monthly reports. LWWSS' ES has not yet received any checklists, but will begin requesting them during the second quarter of year four.
		Preparation works for the installation of source meters began at the end of the fourth quarter of year three, and installation began at the end of the first quarter of year four. An LWWSS engineer is on site four days/week to supervise Modon's work.
		LWWSS' ES will go on site visits twice per quarter with the LWWSS engineer to ensure that all mitigation measures are being followed. Photos will be included in the EMMP monitoring files.
5.2.1-5.2.2	Jeita pump station rehabilitation	The ERAC and EMMP were approved by LWWSS' COTR during the fourth quarter of year three.

		<p>The EMMP includes an environmental mitigation inspection checklist that BMLWE's engineers must complete during the rehabilitation and at the beginning of the operation of Jeita. LWWSS is still awaiting a commitment letter from BMLWE's Director General (DG) concerning the environmental mitigation process, but continues to follow up with the DG and we hope to receive this letter in the second quarter. In the meantime, during installation, BMLWE engineers are completing the environmental mitigation inspection checklists that were developed by LWWSS' ES. LWWSS' ES has not yet received the checklists, but will request them during the second quarter of year four.</p>
		<p>The rehabilitation began at the end of the fourth quarter and will be completed early in the second quarter of year four. During the first quarter, LWWSS' ES went on a site visit with the LWWSS engineers to ensure that all mitigation measures are being followed during the rehabilitation process. Photos of this site visit are included in the EMMP monitoring files.</p>
		<p>The rehabilitation was completed in the second quarter of year four. The BMLWE engineers have completed the environmental mitigation inspection checklists and delivered them to the LWWSS' ES and M&E specialist during the second quarter of year four. Also, the commitment letter from BMLWE's Director General (DG) concerning the environmental mitigation process was received. The letter and checklists are included in the EMMP monitoring files.</p>
5.2.3-5.2.4	Pump station rehabilitation in North Lebanon	<p>This activity has been delayed and began during the second quarter of year four with well assessment tests taking place, followed by the design of the rehabilitation of pump stations (to take place during the third quarter of year four). LWWSS' M&E specialist will complete the ERAC and EMMP during the third quarter of year four.</p>
5.3	Back-up power generators for NLWE pump stations	<p>The ERAC and EMMP were approved by LWWSS' COTR during the fourth quarter of year three.</p> <p>The EMMP, as well as an environmental mitigation inspection checklist, was included in the subcontract with Edan Group International (signed in September 2012), the vendor that is supplying and installing the back-up generators.</p>

		Once the installation of the generators begins (third quarter of year four), Edan Group International's site manager will ensure that the mitigation measures are followed at each site and will complete the checklist. LWWSS engineers will be on site during the installation, and the ES will also conduct monthly site visits to ensure that mitigation measures are being followed.
		There have been two amendments to the EMMP during the second quarter of year four, both dealing with mitigation of the noxious exhaust from the generators. The second amendment was approved by LWWSS' COTR during the second quarter of year four.
5.4	Upgrading water analysis laboratories in SLWE and BWE (Y3) and rehabilitation and equipment procurement in BWE (Y4)	-The ERAC and EMMP for the year three activities in SLWE and BWE were approved by LWWSS' COTR during the second quarter of year three.
		-The ERAC and EMMP for the year four activity with BWE will be completed in the second quarter of year four.
		LWWSS' capacity building specialist and engineers conducted frequent site visits to the laboratories throughout year three to ensure that all mitigation measures were followed and reported back to the ES, as well as taking photos for documentation. The ES also conducted a couple site visits to both SLWE and BWE and found that all mitigation measures were being followed.
		As per the EMMP, both the SLWE Director General and the BWE Director General signed commitment letters agreeing to follow detailed safety procedures during use of the equipment and to dispose of laboratory equipment in an environmentally responsible manner at the end-of-useful life of the equipment.
		For the year four activity with BWE, as with the year three activities, the ERAC and EMMP will require the same training activities to be conducted, as well as commitment from the WE to abide by safety measures and environmentally responsible disposal. LWWSS' ES will request a commitment letter from BWE's Director General in this regard.
		The ERAC and EMMP for the year four activity with BWE was completed in the second quarter of year four and sent to LWWSS' COTR.

5.5	Customer Service Center in BWE	The ERAC and EMMP were approved by LWWSS' COTR during the third quarter of year three.
		<i>Rehabilitation</i> - The contractor ensured that all mitigation measures were followed, and completed an environmental mitigation inspection checklist and turned this into the ES. LWWSS' Customer Service Specialist conducted frequent site visits during the rehabilitation and reported back to the ES, as well as taking photos for documentation. All photos are included in the EMMP monitoring files.
		<i>Operation</i> - As per the EMMP, the BWE Director General signed a commitment letter to follow the mitigation measures during operation. The ES also conducted a couple site visits to the customer service center during operation to ensure that these measures are being followed and took photos for documentation. All photos are included in the EMMP monitoring files.
5.6	Upgrade IT equipment in BWE	The ERAC and EMMP were approved by LWWSS' COTR during the second quarter of year three.
		As per the EMMP, the BWE Director General signed a commitment letter agreeing to dispose of IT equipment in an environmentally responsible manner at the end-of-useful life of the equipment.
	Upgrade IT equipment in SLWE	'The ERAC and EMMP for SLWE were approved by LWWSS' COTR during the second quarter of year four. As per the EMMP, the SLWE Director General signed a commitment letter agreeing to dispose of IT equipment in an environmentally responsible manner at the end-of-useful life of the equipment. The letter is included in the EMMP monitoring files.
5.7	GNSS procurement and training for SLWE	The ERAC and EMMP were approved by LWWSS' COTR during the second quarter of year three.
		As per the EMMP, the SLWE Director General signed a commitment letter agreeing to dispose of the GNSS equipment in an environmentally responsible manner at the end-of-useful life of the equipment.

6.1	Network rehabilitation in Zahle (BWE)	The ERAC and EMMP were turned into the LWWSS COTR at the end of the fourth quarter of year three and it was approved during the first quarter of year four.
		Environmental compliance language was included in the subcontract with WET, the contractor that is designing and supervising the network rehabilitation.
		The EMMP was developed after the preliminary design was submitted by WET and WET was given the EMMP and the environmental mitigation inspection checklist developed by LWWSS' ES.
		The EMMP was included in the subcontract with the construction subcontractor, who will be responsible for following mitigation measures during the rehabilitation. WET will be responsible for monitoring the construction subcontractor and will fill out the checklists and turn them in with monthly reports.
		Once the rehabilitation begins in year four, LWWSS' ES will conduct site visits twice quarterly to ensure that all mitigation measures are being followed.
6.2	Expanding service provision in Beit Mellat (NLWE)	This activity will begin during year four. The ES will complete the ERAC and EMMP during the third quarter of year four after the subcontractor has completed the preliminary design.
6.3	Pump station rehabilitation in South Lebanon	This activity will begin during year four. The ES completed the ERAC and EMMP during the second quarter of year four when the final design was completed by CDM Smith and their subcontractor DEP. The M&E specialist requested and received a commitment letter by SLWE DG regarding the use of the Ras Al Ain landfill for excavation waste and decommissioned equipment eventual disposal. The ERAC and EMMP were submitted to LWWSS COTR during the fourth quarter of year four, and are awaiting approval.
6.4	Chlorination systems installation and training	The ERAC and EMMP were approved by LWWSS' COTR during the first quarter of year three.

		LWWSS' capacity building specialist and engineers conducted frequent site visits to chlorination sites throughout year three to ensure that all mitigation measures were followed and reported back to the ES, as well as taking photos for documentation. Photos are included in the EMMP monitoring files.
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ERAC = Environmental Review and Assessment Checklist

EMMP = Environmental Mitigation and Monitoring Plan

ES = LWWSS Environmental Specialist

ANNEX 1: YEAR-FOUR PRELIMINARY PMP REPORT ENDING THE SECOND QUARTER OF THE WORK PLAN YEAR

Progress towards achieving LWWSS program outcomes is measured in part through tracking of LWWSS's 8 performance indicators. The indicator targets are reported in the Performance Management Plan (PMP) at the beginning of each program year, while the actuals are reported twice throughout the year – interim figures are reported in the second quarter report and final figures are reported in the fourth quarter report. The cumulative figures – adding together the actuals from years one, two, three, and four – for each indicator are also included below in the right-hand column.

Indicator/Unit of Measure	Disaggregation	BL Year Value	2010 Target	2010 Actual	2011 Target	2011 Actual	2012 Target	2012 Actual	2013 Target	2013 Actual (interim figures, as of Q2)	2014 Target	2014 Actual	2015 Target	2015 Actual	Cumulative

Indicator/Unit of Measure	Disaggregation	BL Year Value	2010 Target	2010 Actual	2011 Target	2011 Actual	2012 Target	2012 Actual	2013 Target	2013 Actual (interim figures, as of Q2)	2014 Target	2014 Actual	2015 Target	2015 Actual	Cumulative
1. Number of people receiving improved service quality from existing improved drinking water sources (F) ¹	Gender ²	0	Male 686,980 Female 715,275 Total-1,402,000	Male 722,864 Female 752,369 Total-1,475,233	Male 379,897 Female 395,403 Total-775,300	Male 409,808 Female 426,535 Total-836,343	Male 300,673 Female 312,946 Total-613,619	Male 310,427 Female 323,098 Total-633,525	Male 22,846 Female 23,779 Total-46,625	Male 22,876 Female 23,810 Total-46,686	Male 0 Female 0 Total- ³ 0		Male 10,134 Female 10,547 Total-20,681		Male 1,465,975 Female 1,525,812 Total

Indicator/Unit of Measure	Disaggregation	BL Year Value	2010 Target	2010 Actual	2011 Target	2011 Actual	2012 Target	2012 Actual	2013 Target	2013 Actual (interim figures, as of Q2)	2014 Target	2014 Actual	2015 Target	2015 Actual	Cumulative
2. Percent of water revenues collected by targeted water entities	WE	59.1 %	60%	62.5%	63%	63%	64%	66.79% ⁴	65%	⁵	66%		N/A	N/A	63 %

• ¹ Indicators 1, 4, and 6: People benefiting from multiple activities are only counted once. Cumulative values are also shown in the further column to the right.

² The CIA Factbook lists the ratio of male to female population in Lebanon as 49% male and 51% female.

³ While there are several activities during year five of the program that will improve service quality, the beneficiaries of these activities will not be counted, as they were already counted during years two and three of the LWWSS program. The new subscribers of the previous year will be counted in case they benefit from the activities counted. The targets after year 4 will be estimated yearly based on the year's projected new subscriptions.

⁴ This percentage is an estimate. It will be corrected when all data on billing and collection rates is received from BMLWE and NLWE.

⁵ This number will not be available until Q2 of Y5, as the WE fiscal year ends on December 31.

Indicator/Unit of Measure	Disaggregation	BL Year Value	2010 Target	2010 Actual	2011 Target	2011 Actual	2012 Target	2012 Actual	2013 Target	2013 Actual (interim figures, as of Q2)	2014 Target	2014 Actual	2015 Target	2015 Actual	Cumulative
3.Number of training activities provided to staff from water entities as a result of USG assistance	WE	0	3	BML-1 SL-1 NL-1 B-0 Cross-WE-0 Total-3	6	BML-2 SL-1 NL-1 B-1 Cross-WE-1 Total-6	22	BML-8 SL-1 NL-1 B-11 Cross-WE-2 Total-23	12	BML- 1 SL-0 N -1 B-2 Cross-WE- 1 Total-5	10	BML- SL- NL- B- Cross-WE- Total-	1	BML- SL- NL- B- Cross-WE- Total-	B M L - 1 2 S L - 3 N L - 4 B - 1 4 C r o s s - W E - 4 T o t a

Indicator/Unit of Measure	Disaggregation	BL Year Value	2010 Target	2010 Actual	2011 Target	2011 Actual	2012 Target	2012 Actual	2013 Target	2013 Actual (interim figures, as of Q2)	2014 Target	2014 Actual	2015 Target	2015 Actual	Cumulative
4. Number Staff from Water Entities Trained as a Result of UGG Assistance	Gender	0	M-25 F-10 Total – 35	M-2 F-4 Total - 6	M-51 F-24 Total – 75	M-91 F-15 Total – 106	M-66 F-34 Total – 100	M-84 F-48 Total – 132	M- 38 F- 21 Total – 59	M- 18 F- 14 Total – 32	M- 37 F- 26 Total – 63		M- 6 F- 0 Total – 6		M - 1 - 9 5 F - 8 1 T o t a l - 2 7 6

Indicator/Unit of Measure	Disaggregation	BL Year Value	2010 Target	2010 Actual	2011 Target	2011 Actual	2012 Target	2012 Actual	2013 Target	2013 Actual (interim figures, as of Q2)	2014 Target	2014 Actual	2015 Target	2015 Actual	Cumulative
5. Number of management systems and plans used at water management entities as a result of USG assistance	WE	0	3	BML-3 SL-0 NL-0 B-0 Total-3	2	BML-1 SL-0 NL-0 B-2 Total-3	12	BML-5 SL-1 NL-1 B-7 Total-14	12	BML-1 SL-0 NL-0 B-3 Total-4	10	BML- SL- NL- B- Total-	N/A	N/A	BML-10 SL-1 NL-1 B-1 2 Total-24

Indicator/Unit of Measure	Disaggregation	BL Year Value	2010 Target	2010 Actual	2011 Target	2011 Actual	2012 Target	2012 Actual	2013 Target	2013 Actual (interim figures, as of Q2)	2014 Target	2014 Actual	2015 Target	2015 Actual	Cumulative
6. Number of water users receiving guidance on efficient water use	Gender	0	M-1,300 F-700 Total 2,000	0	M-1,300 F-700 Total 2,000	M-81,570 F-84,933 Total-166,503	M-70,453 F-73,328 Total 143,781	M-70,455 F-73,271 Total 143,726	M-1,250 F-1,250 Total-2,500	M-1,210 F-1,210 Total-2,420	N/A		N/A		M-152,025 F-158,204 Total-310,229

Indicator/Unit of Measure	Disaggregation	BL Year Value	2010 Target	2010 Actual	2011 Target	2011 Actual	2012 Target	2012 Actual	2013 Target	2013 Actual (interim figures, as of Q2)	2014 Target	2014 Actual	2015 Target	2015 Actual	Cumulative
7. Number of functioning water facilities constructed or rehabilitated with USG assistance	Water	W-0	W-0	W-0	W-1	W-1	W-10	W-18	W-180	W-1	W-10		W-3		W-200
8. Number of USG Assisted Water Reports or Studies Proposing Legal, Policy, and Institutional Measures or Procedures	N/A	0	1	2	1	2	1	2	1		1		N/A		6

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